SELF STUDY REPORT

COLLEGE OF AGRICULTURE, INDORE

RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWA VIDYALAYA

RAJA PANCHAM SINGH MARG, GWALIOR-474002 (M.P.)

PREFACE

This Self Study Report (SSR) is being presented for accreditation of the University. This Report provides a detailed progress of the institutional progress in the last five years 2016-2021 aimed at strengthening us in terms of quality enhancement. A steering Committee with eminent professors and supporting faculty was formed to initiate the project of preparing the detailed report. Meetings, continuous reviews and follow-ups were held with the Team members, staff, concerned authorities, students and other stake holders for accurate preparation and presentation of the same. Departmental discussions were held with the Heads of Sections for Departmental Profile and other required details. With collaborated efforts by each and every member of the Institution, the endeavor of preparation of SSR was completed successfully.

The college is well equipped with best infra structure and equipments, helpful in creating goodwill and remarkable credibility. The College of Agriculture alumni are posted in varied national and multinational institutes, banking sectors while others are successful entrepreneurs contributing towards the progress of the nation and enhancing the agricultural sector. We firmly believe that our remarkable credentials in the field of Education, Research and Extension can pave way for the budding agriculture students and make them proficient enough to attain their desired goals and targets of acquiring sustainable agriculture.

I deeply appreciate the sincere involvement and painstaking cooperative efforts of the entire team for the constant support rendered in the preparation of this Self Study Report. I would like to express my sincere and humble gratitude to Hon'ble Vice Chancellor for providing valuable guidance. I also extend my sincere thanks to the HOD's, Members of the steering team, Technical staff, Contractual Teachers and office staff who have directly or indirectly supported and helped us in preparing this Self Study Report.

We are very much eager to interact with the Accreditation Team online for their valuable comments and suggestions. We hope that our efforts will be applauded by the Team.

With thanks and greetings

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

(Dr. Ashok Kumar Sharma)
Dean
College of Agriculture, Indore

CONTENTS

SELF STUDY REPORT OF COLLEGE OF AGRICULTURE
INDORE

HISTORY

Indore being an educational and a commercial hub enjoys the enviable status in Madhya Pradesh, the heart of the country. Its history depicts a rich and prosperous agricultural production. The year 1924 will always be known as a land mark for, the Institute of Plant Industry came into existence, to enhance the agriculture production and research opportunities. Scientists like Dr. Howard of international repute rendered their services in the institute. The hard work and dedication of the scientists of the institute impressed many eminent people including the father of the nation Mahatma Gandhi, who visited the institute to see the Indore Method of Composting already acknowledged by the world all over.

With the passage of time, in the year 1959 a major change took over, the establishment of the Government College of Agriculture with the merger of Institute of Plant Industry which has contributed significantly in the field of teaching, research and extension. With the establishment of Jawaharlal Nehru Krishi Vishwa Vidyalaya in the year 1964 at Jabalpur the College of Agriculture, Indore became its offshoot. Since then it has earned a place of distinction, thanks, to the numerous innovative research activities and teaching learning processes. In the year 2008 with the existence of Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior the College of Agriculture, Indore became an integral part of this new university.

Organizational Setup:

The College was established with the establishment of Jawaharlal Nehru Krishi Vishwa Vidyalaya in the year 1964 at Jabalpur, the College of Agriculture, Indore became its offshoot. In the year 2008 with the existence of Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior the College of Agriculture, Indore became an integral part of this new university. Dean is the Chief Executive of the College. He is supported by head of the Sections of eleven departments. Since its establishment the college has created a base for scientific research and education in a wide spectrum of areas. The College is functioning for Teaching, Research and Extension in Agriculture covering Malwa Plateau and Jhabua Hills Agro Climatic Zones. The College is offering education in Agriculture leading to B.Sc. (Ag) and M.Sc. (Ag) degree. **Rural Entrepreneurship Awareness Development Yojana** is also introduced as an innovative programme in B.Sc. (Ag) curriculum. The UG and PG teaching is imparted through electronic media (PowerPoint presentation). For Bachelor degree programmes the admission is made through Pre Agriculture Test for Faculty of Agriculture organized by MP Board of Professional Examination, Bhopal. Admission in Post-Graduate studies is given on merit basis. Ten percent extra seats are created over and above the prescribed intake capacity for Indians living abroad and foreign nationals besides payment seats. The College has well equipped laboratories, library, instructional farm, ARIS cell linked with global information system, class-room facilities and qualified faculty. The students live in pleasant and intellectually stimulating environment with well-furnished hostels for boys and girls. Well-equipped Gymnasium, NCC, NSS, educational tours and agro-industrial information enable students to develop their personality, whereas placement cell guides them to choose the profession. Rural Agricultural Work Experience is imparted to the students to understand the real village farming situation.

6.5. SELF-STUDY REPORT FOR THE COLLEGES

6.5.1. COLLEGE ADMINISTRATION

6.5.1.1. College Dean's Office Establishment:

- Whether Dean's post has been sanctioned by the appropriate authority as per ICAR Model Act/UGC guidelines? **Yes**
- Date of selection of present Dean: **31/12/2020**
- Mode of selection: **Seniority basis**
- Tenure: **Till new selection**

Dean's Secretariat:

Table: 8. Dean Secretariat

SN	Name of the Post	No. of Post	Actual Filled	Infrastructure/ Facilities/ Office	Area Sq. ft
1.	Dean	1	1	1	28.98
	Establishment				
2.	A.D.A.	1	1	1	
3.	Assistants	9	8	1	274.70
4.	Steno	1	0	1	28.06
5.	Jr. Computer	1	0		57.64
6.	Farm Manager	1	0		28.06
7.	Agril. Ext. Officer	1	0		
8.	Mechanic	1	1		
9.	Black Smith	1	0		
10.	Carpenter	1	0		
11.	Electrician	1	0		
12.	DK/Field Man/ FEO	4	0		
13.	Tractor Driver	1	0		
14.	Jeep Driver	1	0		
15.	Pump Driver	1	0		
	Laboratory staff				
16.	Lab Technician	9	7	15	1182.93
17.	Lab Attendant	9	0		
	Library Staff				
18.	Librarian	1	1	1	111.34
19.	Library Shorter	2	0	1	87.78
	Student welfare				
20.	P.T.I.	1	0	1	28.06
21.	Compounder	1	0	1	28.06
	Works section				
22.	Asstt. Engineer	1	1	1	28.06
23.	Sub Engineer (Civil)	2	1		
24.	Sub Engineer (Elec.)	1	1		
25.	Sub Engineer (Work Charge)	4	0		

The **Secretariat** is well equipped and furnished. All the staffs are provided with computers along with internet connection, along with Wi-Fi facility. Printers, scanners, photocopy machines, telephone are available for office use.

6.5.1.2. Monitoring Mechanism for Quality Education:

6.5.1.2.1. Teaching

The lectures conducted by the faculty are being regularly monitored by The Dean and Academic Staff. Students who are academically weak are given special guidance and extra lectures are conducted for improvement.

After the declaration of result of each semester the results of the students are categorized into four category *viz.,* Distinction, First class, Second class and Pass class. The results of each subject are discussed with students. The results are interpreted and guidance/suggestions are made to improve the results. The innovative suggestions recommendations are forwarded to faculty meeting and academic council.

6.5.1.2.2. Research: (PG student research)

- The frequent visits to the student research field and laboratories by the Head of Section and thesis guide
- Approval of The student advisory committee for PG research and programme of work were done by Director of Instructions
- Action plan of students for research work is discussed and monitored by student seminar

Research projects under jurisdiction

AICRPs on	State Plan	Non- Plan
• Dryland Agriculture • Safflower • Sorghum • Integrated Farming System • Chickpea	• IERP – I • IERP – II • Soil Testing Scheme	• Regional Research Station Pulses • Agril. Res. Lab. • Improvement of Productivity under Rainfed Area • Meteorological Observatory

6.5.1.2.3. Extension

Monitoring mechanism is used to review the Extension activities involved. The extension of different technology developed is disseminated through different *krishi-mela*, agro-technology exhibition, live demonstration, interaction through Scientist Farmer Forum. Outcome of such activities result in the students excelling in academics, research and extracurricular activities

6.5.1.3. CC/ Board of Studies

Department and college level commiittes for teaching is constituted as under:

"Department Level Committee on Teaching at Bachelor Degree"

Nodal officer: **Dr. N.K. Gupta, Professor (Horticulture)**

Department	Committee
1. Agricultural Economics	**Chairman** Dr. P.K. Malviya **Members** • Dr. H.K. Balai • Dr. D.K. Verma
2. Agricultural Extension & Communication	**Chairman** Dr. P.K. Malviya **Members** • Dr. D. Gargav • Dr. D.K. Verma
3. Agronomy	**Chairman** Dr. N.S. Thakur **Members** • Dr. D.V. Bhagat • Dr. N. Kumawat • Dr. J. Patidar
4. Entomology	**Chairman** Dr. Indu Swarup **Members** • Dr. N. Raypuriya
5. Horticulture	**Chairman** Dr. N.K. Gupta **Members** • Dr. Deeksha Tembhre
6. Genetics & Plant Breeding	**Chairman** Dr. Indu Swarup **Members** • Dr. Mukesh Saxena • Dr. U. Saxena
7. Plant Pathology	**Chairman** Dr. R.K. Singh **Members** • Dr. Gopala • Dr. Priyanka Singh
8. Soil Science and Agricultural Chemistry	**Chairman** Dr. K.S. Bangar **Members** • Dr. B. Singh • Dr. B.B. Parmar
9. Plant Physiology	**Chairman** Dr. H.L. Khapediya

Department	Committee
	Members • Dr. Gopala • Dr. N. Raypuriya
10. Agril. Statistics	**Chairman** Dr. K.S. Kumar **Members** • Dr. M.L. Jadav • Dr. J. Patidar
11. Agril. Engineering	**Chairman** Dr. M.L. Jadav **Members** • Dr. K.S. Kumar • N. Kumawat

"College Level Committee on Teaching"

Nodal officer: **Dr. N.S. Thakur, Professor (Agronomy)**

	Committee
Dr. A.K. Sharma	Chairman
Members from all teaching departments	
1. Agricultural Economics	• Dr. P.K. Malviya, HoS • Dr. H.K. Balai
2. Agricultural Extension & Communication	• Dr. D. Gargav • Dr. D.K. Verma
3. Agronomy	• Dr. N.S. Thakur • Dr. J. Patidar
4. Entomology	• Dr. N. Raipuriya
5. Horticulture	• Dr. N.K. Gupta, HoS • Dr. D. Tembhre
6. Genetics & Plant Breeding	• Dr. Indu Swarup, HoS • Dr. Mukesh Saxena
7. Plant Pathology	• Dr. R.K. Singh, HoS • Dr. Gopala
8. Soil Science and Agricultural Chemistry	• Dr. K.S. Bangar, HoS • Dr. B.B. Parmar
9. Plant Physiology	• Dr. H.L. Khapediya, HoS
10. Agril. Statistics	• Dr. K.S. Kumar, HoS
11. Agril. Engineering	• Dr. M.L. Jadav, HoS
12. Library	• **Shri S.S.** Chouhan

6.5.1.4. Anti-Ragging Cell

The guidelines provided by the ICAR regarding anti-ragging is followed by the college. Anti-Ragging Cell has been constituted in the college. The Dean of the college is the Chairman of the Anti-Ragging Cell. Various members constitute the committee from

different fields like a nominee of District Collector and Police Superintendent, parents, students, hostel wardens.

Table: 12. Constitution of anti-ragging committee

Sr.No.	Name	Contact Number	e-mail address
1.	Dr. A.K. Sharma, Dean **Chairman**	93007 48208	dean.indore@rvskvv.net
Members			
2.	Dr. K.S. Bangar, Professor	94253 13580	bangarks59@gmail.com
3.	Dr. K.S. Kumar, Professor	79996 71125	skkoganti57@gmail.com
4.	Dr. N.S. Thakur, Professor	98935 70012	thakurns@rediffmail.com
5.	Dr. N.K. Gupta, Professor	98930 98430	drgupta27@gmail.com
6.	Dr. Bharat Singh, Professor	94250 29424	singhbharat05@gmail.com
7.	Dr. B.B. Parmar, Asso. Pr.	94248 94751	bbparmar11@rediffmail.com
8.	Dr. (Smt.) S. Choudhary, Professor	94240 83634	dr.sandhya6@gmail.com
9.	Dr. (Smt.) S. Barche, Professor	73544 00431	Sbkdap07@rediffmail.com
10.	Dr. H.L. Khapediya, Asstt. Professor	90097 11172	hkhapediya@gmail.com
11.	Smt. M. Bhoyar, AG-3	88394 38704	
12.	Shri Munish Sikarwar (Collector Nominee)	90390 26639	
13.	Smt. Manju Yadav (S.P. Nominee)		
14.	Ku. Kanak Sasane, PG Student	8602233428	sasane.kanak@gmail.com
15.	Sh. Jayesh Gautam, UG student	8085370376	jayeshgautam111@gmail.com
16.	Smt. Afroj Begam, Parent	8224090225	
17.	Sh. Harinarayan Patidar, Parent	89596 6338	
National Anti-Ragging Helpline:		**1800-180-5522 (24x7 Toll free)**	
e mail :-		helpline@antiragging.net	
College of Agriculture, Indore		**0731 – 2492607**	**dean.indore@rvskvv.net**

The notice of the anti-ragging committee is placed on the notice board of the hostel and college notice board. At the time of the admission to the first year an indemnity bond on a bond paper is taken from each student. Similarly the students also have to submit an undertaking online on the anti-ragging portal. The major highlights of the Anti-Ragging Act have been placed in the college and hostel premises. Separate anti-ragging squad committee are also formed at the collegiate level to control ragging activity in the hostel. Frequent visits are made by the committee to the hostel to ensure safety of the students. Regular visits of the staff of the squad committee are held to the hostel where the first

year students are residing. During the visit to the hostel, the faculty members interact with the students make them aware of the provisions of anti-ragging. Through the counselling of the students the students are also made aware of the different provisions of UGC anti-ragging law.

Table: 13. Anti-Ragging squad committee

DAY AND NIGHT	Contact nos.
Dr. N.S. Thakur, Prof. & I/c Academic Section	98935 70012
Dr. B.B. Parmar, Assoc. Professor & H.S. (Soil Sc.)	98939 46434
Dr. (Smt) S. Barche, Assoc. Prof. (Hort) & Hostel Warden	73544 00431
Dr. H.L. Khapediya, Asstt. Professor (Pl. Phys) and Hostel Warden	90097 11172
Dr. M.K. Saxena, Asstt. Professor (Pl. Breed.) and Hostel Warden	94250 82622
Dr. N. Kumawat, Scientist (Agro.) Hostel Warden	94248 76648
Dr. S.C. Tiwari (Soil. Sc.) I/c Sports	94259 52990
Day (9.30 To 11.30)	
Dr. K.S. Kumar, Professor & H.S. (Statistics)	94245 50463
Dr. S.K. Choudhary, Professor (Agronomy)	94240 83624
Dr. Deeksha Tembhre, Scientist (Hort.)	96852 09083
Day (11.30 To 1.30 P.M.)	
Dr. K.S. Bangar, Professor (Soil Sc.)	9425313580
Dr. R.K. Choudhary, Professor & H.S. (Entomology)	94259 50464
Dr. M.L. Jadav, Scientist (Agril. Engg.)	90097 08531
Dr. B.B. Kushwah, Office-In-charge Farm	73895 67691
Day (1.30 To 3.30 P.M.)	
Dr. Bharat Singh, Professor (Soil Sc.)	94250 29424
Dr. R.K. Singh , Asstt. Prof.(Pl. Path.) & I/c NCC	94071 19090
Dr. S.C. Tiwari, Sports Officer	94259 52990
Day (3.30 To 5.30 P.M.)	
Dr. N.K. Gupta, Pr. Scientist & H.S. (Hort.)	98930 98430
Dr. H.L. Khapediya, Asstt. Professor (Pl. Physiology) & Hostel Warden	90097 11172

6.5.1.4.1. Details of proceedings conducted during last five year

Table: 14. Details of complaints received during last five year

SN	Subject	2016-17	2017-18	2018-19	2019-20	2020-21
1.	No. of complaints of ragging received during year	**0**	**0**	**0**	**1**	**0**
2.	No. of complaints disposed of during the year	**0**	**0**	**0**	**1**	**0**
3.	No. of cases pending for more than 90 days	**0**	**0**	**0**	**0**	**0**
4.	Number of workshops on awareness programme against ragging conducted during the year	**Every year orientation of new entrances are taken and they made aware of ragging**				
5.	Nature of action	**0**	**0**	**0**	Expulsion from hostel and cash fine of Rs. 3000/-	**0**

6.5.1.5. Biological waste Disposal facility

No harmful chemicals, biological, radioactive etc. are being generated by the college. However, college has formulated a committee for biological waste disposal. All operations regarding waste disposal operations by the college have been adopted as per government guidelines.

Role of committee:

1. To formulate the system for biological waste disposal at college level.
2. To monitor biological waste disposal at college level.
3. To formulate rules and regulations for biological waste disposal as per norms.
4. To conduct timely hands on training on biological waste system for staff and students.

Accordingly, the committee has initiated, classified and formulated the biological waste management and its disposal at sectional level.

The following disposal mechanism is initiated and deployed by different sections.

Table: 16. Disposal mechanism is initiated and deployed

Name of the section	Type of waste material	Disposal mechanism
All sections	All hazardous biological and chemical waste	All hazardous biological and chemical waste is collected and categorised* at section level and segregated in colour coded bags/container
	Agriculture non-hazardous degradable waste	All agriculture non-hazardous degradable waste are decomposed by adopting scientific procedure of composting

*Hazardous biological and chemical wastes categories and their segregation, collection, treatment, processing and disposal options.

17. The farm organic residues and biological waste of farm are converted into compost. Crop residue of *kharif*, *rabi* seed production crops residue, weeds and tree leaves are used for preparing organic manures *viz.* composts by adopting the following methods

a) Pit and heap method
b) *In situ* method

6.5.1.6. Institutional Ethics Committee for Experiment on Animals

The clinical experiments on animal are **not conducted**.

6.5.1.7. Committee for Prevention of Sexual Harassment of Women at Work Places

Table: 18. Committee for Prevention of Sexual Harassment of Women

SN	Name of the staff/ committee	Designation
1	Dr. S.K. Choudhary	Chairman
2	Dr. Sandhya Choudhary	Member
3	Dr. Swati Barche	Member
4	Dr. Usha Saxena	Member

Meetings are conducted at regular intervals by the Committee, and complaints if any are redressed.

Table: 19. Year-wise meetings of Committee for Prevention of Sexual Harassment of Women conducted during last five years

Subject	2016-17	2017-18	2018-19	2019-20	2020-21
Date of meeting held	**-**	**-**	**-**	**14/01/2019 18/01/2019**	**-**

Table: 20. Details of proceeding conducted during last five year of Committee for Prevention of Sexual Harassment of Women

Subject	2016-17	2017-18	2018-19	2019-20	2020-21
Number of complaints of sexual harassment received in the year	**0**	**0**	**1**	**0**	**0**
Number of complaints disposed of during the year	**0**	**0**	**1**	**0**	**0**
Number of cases pending for more than 90 days	**Nil**	**Nil**	**Nil**	**Nil**	**Nil**
Number of workshops on awareness programme against sexual harassment conducted during the year	**2**	**1**	**1**	**1**	**0**
Nature of action	**---**	**--**	**Warning**	**----**	**--**
Proceeding conducted					

6.5.2. FACULTY

6.5.2.1. Faculty Strength
College

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/ UGC/ VCI/ Other regulatory bodies
1	**Professor**	**4**	**-**	**1**
2	**Associate Professor**	**1**	**1**	**2**
3	**Assistant Professor**	**1**	**20**	**26**

- CAS professor

As per faculty recommended by ICAR the faculty strength is not sufficient. However, the Research staffs, extension staff, contractual faculty, guest faculty, adjunct faculty are being appointed to complete the curriculum of the undergraduate and post graduate degree programme.

Research staff

SN	Sanction Faculty	Faculty in Place	Vacant Position
1	Professor/ Pr. Scientist	**1**	**1**
2	Associate Professor/ Sr. Scientist	**6**	**5**
3	Assistant Professor/ Scientist	**9**	**13**

6.5.2.2. Faculty Profile (Department wise)

Table: 22. Department wise faculty profile

Department	Number of faculty positions									
	Professors			Assoc. Professors			Assistant Professors			
	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Part-time Contractual Teacher
1. Agricultural Economics	-	1	-	-	-	-	3	0	3	1
2. Agricultural Extension & Communication	-	-	-	-	-	-	3	0	2	1
3. Agronomy	-	1	-	1	0	1	3	0	2	1
4. Entomology	-	-	-	-	-	-	2	0	2	0
5. Horticulture	-	-	-	-	-	-	1	0	1	-
6. Plant Breeding	-	-	-	-	-	-	1	0	1	0
7. Plant Pathology	-	-	-	-	-	-	1	0	1	2
8. Soil Science and Agricultural Chemistry	1	1	0	-	1	-	4	0	4	1
9. Plant Physiology	-	-	-	1	0	1	1	1	0	-
10. Agril. Statistics	-	1	-	-	-	-	1	0	1	-
11. Veterinary Sc.	-	-	-	-	-	-	1	0	1	-
12. A.H. & Dairy	-	-	-	-	-	-	2	0	2	-
13. Agril. Engineering	-	-	-	-	-	-	1	0	1	-
14. Physics	-	-	-	-	-	-	1	0	1	-
15. English	-	-	-	-	-	-	1	0	1	1
16. Librarian	-	-	-	-	-	-	1	1	0	-
17. PTI	-	-	-	-	-	-	1	0	1	-
Total	**1**	**4**	**0**	**2**	**1**	**2**	**28**	**2**	**26**	**7**

#TA Library

Present profile of faculty is not sufficient. However, the college is engaging contractual, guest faculties and pooled services of faculties, from KVKs.

Research and Extension

Department	Number of faculty positions sanctioned									
	Professors			Assoc. Professors			Assistant Professors			Part-time Contractual Teacher
	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	Sanctioned	Filled	Vacant	
1. Agricultural Economics	**0**	0	0	**1**	0	1	1	0	1	
2. Agricultural Extension & Communication	**0**	0	0	**0**	0	0	0	0	0	
3. Agronomy	1	1	0	3	3	0	4	0	4	
4. Entomology	1	0	1	**0**	0	0	1	1	0	
5. Horticulture	**0**	0	0	**0**	0	0	1	1	0	
6. Plant Breeding	**0**	0	0	**3**	1	2	3	1	2	
7. Plant Pathology	**0**	0	0	**1**	0	1	3	2	1	
8. Soil Science and Agricultural Chemistry	**0**	0	0	**1**	1	0	1	1	0	
9. Plant Physiology	**0**	0	0	**0**	0	0	0	0	0	
10. Agril. Statistics	**0**	0	0	**0**	0	0	0	0	0	
11. Veterinary Sc.	**0**	0	0	**0**	0	0	0	0	0	
12. A.H. & Dairy	**0**	0	0	**0**	0	0	0	0	0	
13. Agril. Engineering	**0**	0	0	**1**	1	0	1	0	1	
14. Physics	**0**	0	0	**0**	0	0	0	0	0	
15. English	**0**	0	0	**0**	0	0	0	0	0	
16. Librarian	**0**	0	0	**0**	0	0	0	0	0	
17. PTI	**0**	0	0	**0**	0	0	0	0	0	
18. Agro Meteorology	**0**	0	0	**1**	0	1	0	0	0	
19. Any Discipline	**0**	0	0	**0**	0	0	7	3	4	
Total	**2**	**1**	**1**	**11**	**6**	**5**	**22**	**9**	**13**	

6.5.2.3. Credentials of the Faculty

Table: 23.Credentials of faculty

SN	Name of faculty	Highest Qualifi-cation	Experience (Years)*			Honours/ Awards/ Distinction	Present posting
			T*	R*	E		
	AGRONOMY						
1	Dr. A.K. Sharma	Ph.D	37*	37*	0		Research
2	Dr. S.K. Choudhary	Ph.D	13	30*	2		Research
3	Dr. N.S. Thakur	Ph.D	18	12	0		College
4	Dr. D.V. Bhagat	Ph.D	6	6			Research
5	Dr. Narendra Kumawat	Ph.D	5*	5*			Research
	SOIL SCIENC & AGRICULTURE CHEMISTRY:						
6	Dr. K.S. Bangar	Ph.D	35*	35*	0		College
7	Dr. B.B. Parmar	Ph.D	32*	32*	0		College
8	Dr. Bharat Singh	Ph.D	6*	6*	0		Research
	PLANT BREEDING & GENETICS:						
9	Dr.(Smt) Indu Swaroop	Ph.D	30*	30*	0		Research
10	Shri M.K. Saxena	Ph.D	5*	5*	0		Research
	PLANT PATHOLOGY:						
11	Dr. R.K. Singh	Ph.D	12*	12*	0		Research
	ENTOMOLOGY						
	STATISTICS:-						
12	Dr. K.S. Kumar	Ph.D	35	0	0		College
	HORTICULTURE						
13	Dr. N.K. Gupta	Ph.D	20*	20*	17		Research
14	Dr.(Smt.) Swati Barche	Ph.D	13*	8*	0		Research
15	Smt. Deeksha Tembhre	Ph.D	13*	13*	0		Research
	EXTENSION:						
	AGRI. ECONOMICS						
17	Dr. P.K. Malviya	Ph.D	40	0	0		College
	AGRI. ENGINEERING						
18	Er. M.L. Jadhav	M.Tech.	13*	13*	0		Research
	PLANT PHYSIOLOGY						
19	Dr. H.L. Khapediya	Ph.D	14	9	14		College
20	Dr. S.P. Mishra	Ph.D	37*	37*			Deputation

T=Teaching, R= Research, E= Extension T*&R*Simultaneously

Publication of faculty

Name of the Department	Full paper	Conference/ Symposium	Books	Books chapter	Manual	Annual/ research reports
Agricultural Extension and communication	33	12	-	-	2	2
Agronomy	122	20	11	14	6	20
Soil Science	47	6	-	5	1	5
Horticulture	24	5	5	2	1	-
Entomology	20	9	5	3	6	-
Plant Pathology	10	5	5	2	2	20
Genetics and Plant Breeding	12	-	6	-	-	42
Agricultural Economics	5	9	-	-	-	-

6.5.2.4. Technical and Supporting Staff

Table: 24. Technical and Supporting staff

Designation	Sanctioned	Filled
Technical	**31**	**11**
Supporting	**63**	**20**
Farm Staff	**11**	**3**

Technical and Supporting staff (State Res. Scheme & ICAR)

Designation	Sanctioned	Filled
Scientist	**35**	**16**
Technical	**44**	**23**
Supporting	**19**	**11**
Farm Staff	**00**	**00**

Table: 25. Distribution of technical/supporting/farm staff

Name of the Scheme /Department	Technical/ Supporting	Farm/Field Staff
Dean Office	5	0
Establishment	4	0
Academic Section	5	0
Account	6	0
Farm Staff	0	3

6.5.3. LEARNING RESOURCES

6.5.3.1 College Library (digital)

College is using learning recourses like texts, videos, software and other ICT enabled material useful for the students.

Location of the Library – College Library is located in the college building, College of Agriculture, Indore.

Table: 26. Staff Position in library

Name of Post	Sanctioned	Filled	Vacant
Librarian	1	1#	0
Library sorter	2	0	2

Books and Other Material: Year wise collection:

Table: 27. Number of documents added in library during the period from 2015–2020

Year	Books	Purchased (Rs. in lacs)	Back volumes	e-books/ amount
2016-17	1643	6.50	Nil	-
2017-18	683	4.00	06	-
2018-19	809	6.00	Nil	-
2019-20	1414	8.00	Nil	-
2020-21	185	1.00	Nil	55/ 4.00 L
	5090	**26.50**	**06**	**55**

Table: 28. Year Wise Visitors in Library

Year	Visitors of Library
2016-17	**478**
2017-18	**530**
2018-19	**517**
2019-20	**485**
2020-21	**135**
Total	**2145**

Services Available:

Traditional- Library provides traditional services under the following categories

S.no	Description	Remarks
1.	Books for reading	17772 (12682+5090 = 17772)Books Available
2.	Reference service	2500 Books Available
3.	Reading hall	Available
4.	Photocopy facility	Available
5.	CAS for faculties	Available
6.	SDI for faculties	Available

Online – Library provides online services under the following categories.

S.no	Description	Remarks
1.	Issue and return with help of KOHA	Yes
2.	Internet facility for searching the information	Yes

3.	E-resources are available in the e-books, e-journals, e-course etc .	CeRA , NDL , Swayam , NIPA Genx Electronic resources and solutions , Library Services
4.	Internet Service	Yes
5.	OPAC (Online Public Access Catalogue) (http://Coanopac.firstray.in/)	NO
6.	Online e-journals/virtual e-journals (J-gate) (http://www.jgate.in)	Yes
7.	E – Courses (e – *Krishishiksha*) (http://ecourses.iasri.res.in/)	Yes
8.	*Krishikosh* (Institutional Repository) (http://krishikosh.egranth.ac.in)	Yes
9.	CAS (Current Awareness Service)	Yes
10.	SDI (Selective Dissemination of Information)	Yes
11.	Software's used	As per ICAR Guidelines KOHA- Library Management software is in operation for whole library automation (*i.e.* Accession, Cataloguing & Circulation).

Table: 29. Number of Computers/Photocopy machine/Wi Fi in library

S.no	Item .NO	Remarks
1.	Computers	17
2.	Laptop	01
3.	Photocopy machine	01
4.	Wi Fi	Yes
5.	01 One	Yes
6.	Reading hall	College Library has Three reading hall having a seating capacity of **50** students.
7.	Library Management	College **Library is fully automated. KOHA –** Library Management software in used for all operations. All ICAR e – resources are made available in the library for faculties and students.
8.	Opening Hours	**10 AM To 5 PM**
9.	Subscription to Journals	As **CeRA**(Consortium for E- Resources in Agriculture) is available in the library, hence no need of new journals.
10.	Stocking Management	Subject Wise Classification

6.5.3.2. Laboratories, Instructional farm, Workshops, Dairy, Ponds etc.

Table: 30. Number and area of laboratories available in different departments

SN	Name of the laboratory (Department wise)	Nos	Space (Area) Sq. ft.	Specialty to conduct practical / hands on training
1.	Agricultural Economics	**1**		

2.	Agricultural Extension & Communication	**1**	**1**	**30 students are accommodated in laboratory**
3.	Agronomy	**1**	**14.35×6.10 m**	**To conduct practicals**
4.	Entomology	**1**	**1000 x 1000 sq ft**	**IPM, Production of bio agents and Beneficial Insects**
5.	Horticulture	**1**		
6.	Plant Breeding	**1**		
7.	Plant Pathology	**1**		**Curriculum based practical and hands on training on mushroom and Molecular plant pathology facilities**
8.	Soil Science and Agricultural Chemistry	**2**	**5000**	**To conduct practicals**
9.	Plant Physiology	**1**		
10.	Agril. Statistics	**1**	**5000**	**To conduct practicals**
11.	Veterinary Sc.	**1**		
12.	Agril. Engineering	**1**		
13.	Other- English	**1**		

Table: 31. Farmland (hectare) available

SN	Particulars	Area (ha)
1.	Total land	147.54
2.	Land in Possession	147.54
3.	Irrigated Land	43.52
4.	Rainfed	18.94
5.	Land Under Buildings/ Roads/ Play Ground/ Hills	79.78

Table: 32. Buildings and Infrastructures available

Facility	Area (sq. m.)
Academic buildings	4252
Boys Hostels	1948
Girls Hostels	1521

Longitude & lattitudes:

22.710729, 75.891324

College Bouiding Layout

Farm & Field Layout

Table: 33.Institutional area available

S.No	Particulars	Availability			
		No. of Unit	Plinth Area (Sq.m.)	Capacity if applicable	Adequate (Yes/No)
1.	Administrative offices	06	589.07		No
2.	Classrooms	04	524.85	75 each	No
3.	Laboratory	12	2869.00	30 stds. each	No
4.	Library	02	269.44	-	No
5.	Housing for faculty	63	4808.00	63 units	No
6.	Boy's hostel	02	1948.00	200 nos.	No
7.	Girls Hostel/ teachers home	02	1521.47	114 nos.	No
8.	Sports complex	01	369.75	-	No
9.	Guest House	01	125.14	-	No
10.	Canteen	-	-	-	No
11.	Health clinics	-	-	-	No
12.	Workshops	01	538.84	-	No
13.	Faculty club	01	405.50	-	No
14.	Auditorium	01	600.00	500	No
15.	Examination Hall	01	177.08	150	No
16.	College Store	01	51.24	-	No
17.	Krishak Bhavan	01	390.56	-	No
18.	Trainees Hostel	01	236.90	12 Nos.	No
19.	Cold storage building	01	200.39	-	Yes
20.	Bank/ Post office building	01	240.00	-	Yes
21.	Cycle stand	01	168.00	-	No
22.	Car Parking	01	400.00	8 cars	No
23.	Training Hall	01	225.00	50 nos	Yes

Farm Power, Machineries and Irrigation Facilities

The College has farm power, machineries *viz.*, Reversible Mould-Bold Plough, Rotary Tiller (Rotavator), Cultivator, Ridger, Tractor, Automatic Seed Drill for day to daywork and teaching purpose.

Table: 34. Irrigation infrastructure facilities

Total cultivable land	**62.54 ha**
Irrigated land	**19.94 ha**
Lift Irrigation	**Nil**
No. of wells	**04 - No.**
Area under well irrigation	**10- ha**
No. of bore wells	**08- Nos.**

Farm Pond: The college has 02 farm pond having dimension of 2000 m^3 for irrigation.

Dairy unit: The College has dairy unit for instruction purpose. There are 59 animals, average milk production 65 lit./ day.

6.5.3.3. Student READY/ In-Plant Training / Internship /Experiential Learning Programmes:

Students READY and Experiential Learning Programmes:

The student READY Programme was implemented w.e.f. 2017-18 as per V Dean's Committee syllabus.

Table: 35. List of experiential learning module

S.No	Title of the EL Unit	Date of Start	Nodal Person (Name, Designation, E-mail, Mobile)	Income Generated so far (Rs. in Lakhs)	Current status (Working/ Non Working*)	No. of Students so far
1	Mushroom Cultivation and Value Addition	2017	Dr R.K. Singh, Scientist (Plant pathology)	1.914	Working	84
2	Nursery Management	2016	Dr N.K. Gupta	0.41	Working	165
3	Processing of fruits, vegetable and food crops	2016	Dr Swati Barche	1.46	Working	152
4	Bio-fertilizer & bio-pesticide production	2019	Dr. A.K. Sharma & Dr. A.K. Badaya	0.145	Working	24

Students learnt the propagation technology practically developed planting material by them affords and marketed the produce at various places in the city, they were also acquainted to no. of field crops and their commercial production practices doubt after gaining the deep practical knowledge they shall be able to perform better in this field. All thefarm produce were sold in the local market by the students.

1. **RAWE Programme:** The students of VII semester were sent for work experiencetraining of 6 months duration to different villages.
2. **Educational tour:** 8-10 days duration education tour was arranged between semesterbreak of VII and VIII semester.
3. **Exposure visit:** 2 days duration exposure visits was arranged for VIII semesterstudents.

Learning Outcomes

Knowledge about commercial production of various vegetables was gained by the students.

RAWE Activities




6.5.3.4. Curricula delivery through IT (smart class rooms/interactive board etc.): Yes

This college uses smart class rooms/interactive boards for curricula delivery through IT. Smart-class room facilities have been developed in the college. During the last five years, most faculties have developed ICT enabled teaching material and practical manuals. College has audio visual teaching aid facility, and smart class rooms.
Practical/project work centred courses have been developed. The Institute gives due weight age to the innovative teaching method developed by faculties'. Best Teacher Award of the Institute is also awarded by the College.

Table: 36. Details of class rooms present

(a) Undergraduate (UG)Class Rooms

Class Rooms	Smart class room/ interactive Board
First year Class room	Smart class room
Second year Class room	Smart class room
Third year Class room	Smart class room
Forth year Class room	Smart class room

(b) Postgraduate (PG) Class Rooms

Department	PG Seminar hall (Equipped with AV aids)
1. Agricultural Economics	1
2. Agricultural Extension & Communication	1

3. Agronomy	1
4. Entomology	1
5. Horticulture	1
6. Genetics & Plant Breeding	1
7. Plant Pathology	1
8. Soil Science and Agricultural Chemistry	1

6.5.4. STUDENT DEVELOPMENT

The College through the educational efforts for the Student's Development aims at fostering and nurturing the intellect and character of students by integrating in-class and co-curricular experiences. In order to accomplish this, a wide range of educational experiences through programs and activities that complement and support the academic experience in the classroom is provided by the college.

Experiential Learning Programme is imparted to the Final Year students of the college. The students are required to work in the college on full time basis to understand the need of the module and acquire the latest practical knowledge pertinent to the topic of his/her interest.

Exposure about the latest information is provided to the students to develop them intellectually by organizing lectures by the national / international experts in the respective fields. Field visit/ industrial visit and tour are also organized by the college from time to time to make them aware of the latest trends in the market. Students are also encouraged to participate in the national / international seminars and conference to interact with the experts in the respective fields.

6.5.4.1. Student Intake and Attrition:

Table: 37. Student intake and attrition

Name of the Degree Programme	Actual students admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
B.Sc.(Hons.) Ag.	75	92	81	81	80	11%	0%	0%	0%	0%
M.Sc.(Ag.)	58	57	79	80	76	1%	1%	0%	0%	0%

M.Sc.(Hort.)	8	8	12	12	11	0%	0%	0%	0%	0%

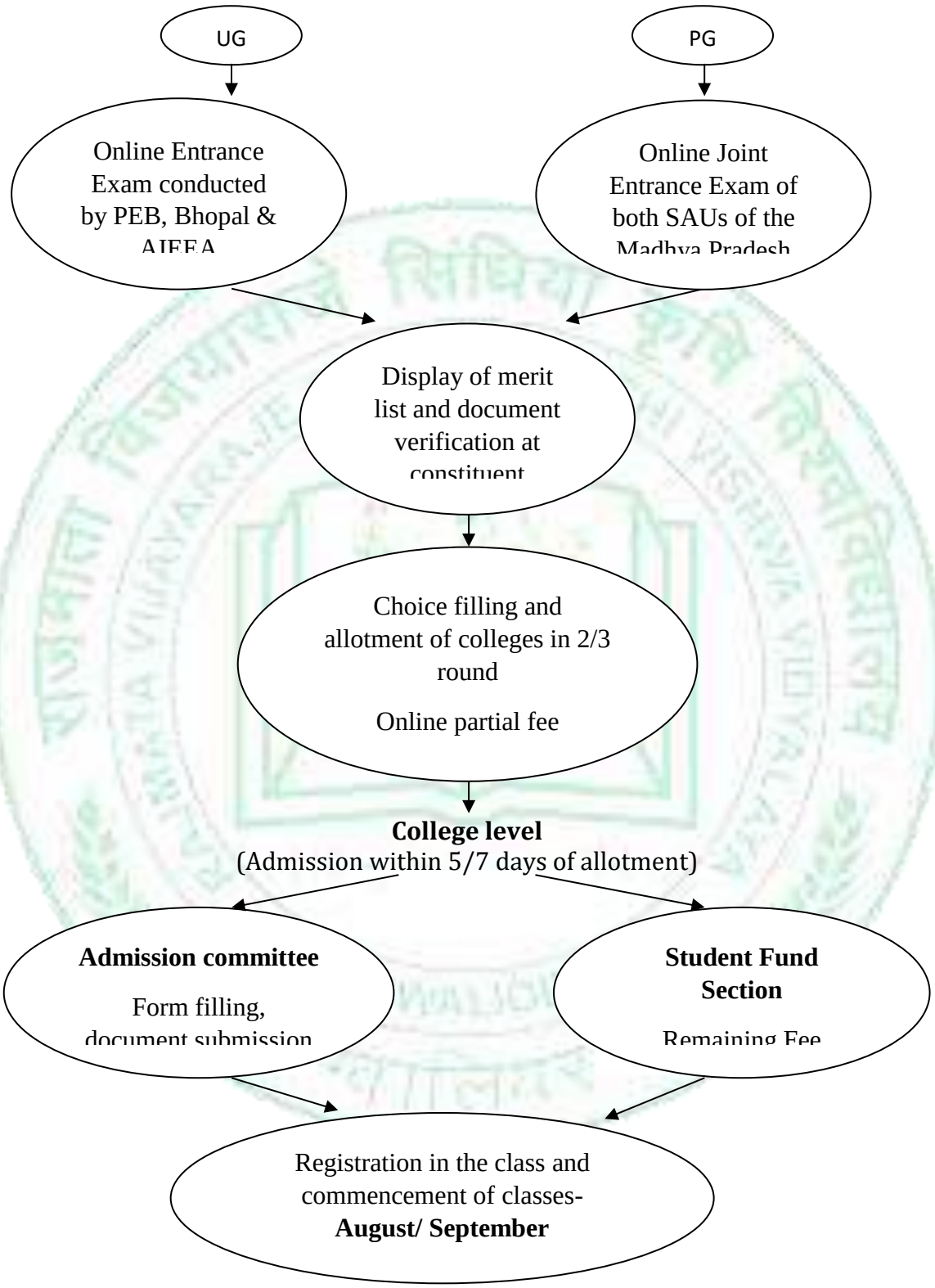
6.5.4.2. Average Number of Students in Theory and Practical Classes

Table: 38. Average number of students in theory and practical classes

Name of the degree programme	Batch of student in theory	Batch of student in practical
Undergraduate (UG)		
B.Sc.(Ag.) Hons.	81	27
Postgraduate (PG)		
M.Sc.(Ag./ Hort.) in 8 discipline		
1. Agricultural Economics	8	8
2. Agricultural Extension & Communication	12	12
3. Agronomy	12	12
4. Entomology	12	12
5. Vegetable Science	12	12
6. Plant Breeding & Genetics	12	12
7. Plant Pathology	12	12
8. Soil Science and Agricultural Chemistry	12	12

6.5.4.3. Admission Process

Admission Process for UG/ PG programme



6.5.4.4. Conduct of Practical and Hands on Training

Agronomy

Charts/specimens of tools and implements, actual seed, weed and crop identification, different methods of sowing, irrigation layouts, live models of pressurized irrigation systems, agro-meteorological instruments, methods of fertilizer application and methods of weed management.

Livestock & Dairy Management

Physical characteristics of different breeds, livestock; Breeding, health, feeding and management of livestock; forage cultivation and nutritional requirement of different categories of animals;

Plant Physiology

Study of water, air and sound pollution; visits to study the ecosystem. Preparation of slides to study the cell division. Floral biology of different major crops of the region is taught and the different breeding methods used for hybridization / crop improvement in field are demonstrated. Experiments on photosynthesis, respiration, transpiration, estimation of chlorophyll content and growth are demonstrated. In plant biotechnology the technique of micro propagation in banana and sugarcane is demonstrated. Demonstration on DNA extraction and gel electrophoresis is also done. In seed technology course practical on seed sampling, preparation of seed sample, cleaning and grading of seed lot, study of physical purity, moisture, germination, seed vigor, viability and heath test is done.

Agricultural Economics

Estimation of cost of cultivation of Crops, depreciation of farm assets, net worth and income statements, financial test ratios, break even analysis of project, study of marketing institutions such as NAFED, SWC, CWC. etc. Economic analysis of different enterprises, partial and complete budgeting and preparation alternative farm plans, assessment of credit requirement for various crops and enterprises. Testing of economic viability of project, loan proposal formulation and assessment of repayment capacity, risk barring ability and returns on investment. Institutional finance, Marketing of Agricultural products and livestock. Input and output markets, financial criteria for appraisal of the project. Seasonal indices of arrival and prices of Agril. Commodities.

Agricultural Engineering

Surveying and leveling; Farm Machinery and power practicals are conducted through cut models of different systems of IC engine and tractor. Protected cultivation; Post harvest Technology.

Agricultural Entomology

Insect morphology and anatomy; classification and identification of distinct insect pest, pest management strategies, collection and extraction of plant parasitic nematodes.

Agricultural Extension & Communication:

Communication skills, preparation of bulletin, pamphlet, booklet; preparation of news, radio talk; channels for effective dissemination of agricultural information.

Horticulture

Propagation methods e.g.Cutting, layering, budding and grafting and crop maximization practices like bending, notching, ringing and girdling, training and pruning. Production Technology of Vegetables and Flower Crops: Maximization of vegetable yield by *viz*., staking, turning, blanching, earthing up. Maximization of flower yield and quality by pinching, disbudding, pruning, bending. Vegetable Production: Production and marketing of various vegetables *viz*., tomato, brinjal, onion, cabbage, cauliflower, broccoli, lettuce, garlic and exotics. Preparation of value added products.

Plant Pathology

Isolation and identification of plant diseases, disease diagnosis of field as well as horticultural crops. Isolation and identification of different beneficial microbes including bio fertilizer, bio agents, mushroom etc.

Soil Science and Agricultural Chemistry

Physical, chemical and biological properties of soils ; recommendation for improving the soil quality, health and crop sustainability; specimens of soil forming rocks and minerals along with their properties, soil profile, tools for collection of soil and irrigation water samples. The qualitative and quantitative analysis of carbohydrates, proteins, lipids and oils are carried out for nutritive values along with their quality in food are tested.

Hands on Training

The agro-industries visited comprise of fruit processing, cold storage, post harvest and marketing management (sorting, grading, packing), rice mill, poultry (layer, broiler and indigenous breeds), poultry feed, sugar mill, dairy (co-operative and private), milk collection, chilling, processing; processing mill, nursery (government and private), agroservice center, etc.

6.5.4.5. Examination and Evaluation Process

System of Education:

UG Programme - ACADEMIC YEAR/SESSION

- The academic Year /Session means two semesters during which a cycle of educational work is completed. It shall commence as per the Academic Calendar/ Semester schedule notified by the Vishwa Vidyalaya (V.V.) from time to time.
- Each semester shall consist of minimum 110 working days. At least 80% of the scheduled classes must be held in a semester
- The candidates admitted for UG degree programme will have to complete **Student READY** (Rural and Entrepreneurship Awareness Development Yojana) programme during VII & VIII semester as per the 'V' Deans Committee Recommendations.

  Mode of Implementation:- Experiential Learning/Hands on Training , Skill Development Training, RAWE, In Plant Training/ Industrial attachment, Students Projects.

ATTENDANCE REQUIRMENTS

- Student are expected to attend all lectures and laboratory/field practicals scheduled during a semester. Attendance of a student in a course should be at least 75% of the scheduled classes in a semester, failing which he/she will be debarred from appearing in final examination. For this purpose attendance in theory and practical classes will be counted separately.

CREDIT, CURRICULUM AND PROGRAMME OF STUDY

- Credit means contact time per week devoted by a student in class, laboratory, fieldwork, and library, etc. Accordingly, credits for a course are distributed in theory and practical separately. Normally, 1 Credit means 60 minutes contact time per week in case of theory and 120 minutes per week in case of practical.
- Course means a series of classes and work experience extended over semester.
- The students admitted in the Vishwa Vidyalaya (V.V.) shall be required to follow the course curriculum as prescribed from time to time.

The residential requirement and maximum period for degree programmes in terms of number of semesters shall be as below

Degree Programme	Residential Requirement (Semester)	Maximum period (Semester)
B.Sc.(Hons.) Ag.	8	12

Provided that, if a student has acquired the status of final year class and could not passthe prescribed courses within the maximum stipulated period laid down in the clause above, the respective Dean of Faculty after scrutiny of the case on merit and subject to good conduct of the student can extend the period for 2 semesters only.Further extension of the period for 2 more semesters may be permitted by the Vice Chancellor only on convincing grounds.

MEDIUM OF INSTRUCTION

The medium of instruction in all Colleges will be English but the teacher may explain the subject matter to the students in Hindi also. However the examinees in the faculty of Agriculture will have the option to answer questions either in English or in mixed language.

EXAMINATION AND EVALUATION

- The academic performance of the student shall be assessed through theory and practical examinations conducted during an academic session.
- Total marks assigned to a course will be 100. It will be distributed as given below.

Midterm Examination	30/40
Theory Assignment	10 (Only theory course)
Practical Examination	15/ 100 (Only practical course)
Practical Assignment	5
Theory Examination	50

A. Pattern of Midterm Examination:

1. It shall be of 30 marks for the courses with practical and theory both.
2. It shall be of 40 marks for the courses with theory only.
3. No midterm examination for the courses with practical only.
4. Maximum time for examination shall be 1 hour.
5. **(a)** Midterm examination (Theory & Practical) – Max. 30 marks
   (i) Objective type 50% (15 questions of multiple choice and / or fill in the blank type only)
   (ii) Short answer type 50% (5 questions of 3 marks)
   (b) Midterm examination (Theory only) – Max- 40 marks
   (i) Objective type 50% (20 questions of multiple choice and / or fill in the blank type only)
   (ii) Short answer type 50% (5 questions of 4 marks)
6. The portion for midterm examination shall be 50% of the proposed course curriculum.
7. Midterm examination shall be conducted as per academic calendar notified by the Vishwa Vidyalalya.

B. Pattern of Assignment Examination:

1. The objective is to prepare the notes.

2. Assignments for each topic of the syllabus will be allotted to the students. Topics will be decided at **H.O.D.** level.
3. Course teachers will guide the students for assignment preparation.
4. 50% marks for quality of write-up and 50% marks for preparation.
5. It shall be **5 marks** for the course with practical and theory both and **10 marks** in case of course with theory only.
6. Instructor shall assign separate topic related to subject for assignment to group of students at the start of session.
7. For the course with theory and practical both assignment shall be practical oriented and student must submit the assignment **on the day of practical examination**. It has to be evaluated by the external examiner.
8. For the course with **theory only**, assignment has to be submitted by the student **at least one month** before final examination.
9. The result of assignment has to be submitted **15 days prior to final examination** for the courses with theory only; whereas, for the courses with theory and practical both should be submitted with the result of practical examination.

C. Pattern of Practical examination:

1. It shall be of **15 marks** for the course with practical and theory both and **100** for the course with practical only.
2. Maximum time for practical examination shall be **2 hours** for the courses with practical and theory both and **3 hours** for the courses with practical only.
3. The following examination pattern shall be adopted for **100 and 15 marks** practical.

S. No.	Particulars	Practical for 100 marks	Practical for 15 marks
a.	Exercise-I	30 marks	4 marks
b.	Exercise-II	20 marks	3 marks
c.	Exercise-III	20 marks	3 marks
d.	*Viva-voce*	20 marks	3 marks
e.	Practical record	10 marks	2 marks
Total:		**100 marks**	**15 marks**

4. One external examiner shall be appointed by the professor & Head for each practical examination. Question paper of examination and Viva-voce are the responsibility of internal and external examiner.
5. Marks shall be submitted by internal with the signature of external within THREE DAYS after completion of practical examination.
6. Date of examination shall be same at Vishwa Vidyalaya level as per the academic calendar.

D. Pattern of Final Theory Examination:

1. Question paper shall be prepared by the external examiner.
2. It shall be of **50 marks**.
3. Maximum time for the examination shall be **3 hours**.
4. **Part A**: It is a compulsory part of **10 marks** with five question (Without any option) short answer type question.

5. **Part B** : It consists of **Six questions** containing **10 marks each**. Out of six questions student shall attempt **four** questions only.
6. In multi-disciplinary courses, the question paper will be divided into Unit I and Unit II. The part A will consists 5 question of one mark each in both the units. Part B will be comprised of three questions of 10 marks in each unit and the student has to attempt any tow questions from each unit. Separate answer books for each unit will be provided to the examiners.

E. Evaluation:

1. Evaluation shall be internal by course instructor of other college.
2. Student shall pass theory and practical examination separately.
3. To pass theory examination student shall score 50% marks i.e. Midterm + Assignment + Final (in the courses without practical)
4. To pass practical examination student shall score 50% marks i.e. Practical + Assignment or Practical only.

Table: 39. Relative weightage to the various examinations conducted Class-work and records maintained during a semester

Examination Weightage (%)

Credit	Midterm	Theory Assignment	Final theory	Practical	Practical Assignment	Total
3(2+1)	30	-	50	15	5	100
2(2+0)	40	10	50	-	-	100
1(0+1)	-	-	-	100	-	100

Grading and declaration of class

Stages for declaration of classes for UG programme

The minimum passing marks in theory or practical shall be 50%. If a student fails to obtain 50% marks either in theory or practical or both examinations, he/she shall be deemed to have failed in theory or practical or both respectively and shall have to reappear in the theory or practical examination as the case may be. Marks secured by a student will be converted into Overall Grade Point Average (OGPA) on 10 point scale.

Table: 41. Grading as per Vth Dean Committee report

Overall Grade Point Average (O.G.P.A.)	5.000 To 5.999	6.000 To 6.999	7.000 To 7.999	8.000 and above
Division	Pass	Second	First	First with Distinction

System of Education:

PG Programme - ACADEMIC YEAR/SESSION

The residential requirement and maximum period for Post degree programmes in terms of number of semesters shall be as below

Degree Programme	Residential Requirement (Semester)	Maximum period (Semester)
M.Sc. (Ag.)	4	8

ATTENDANCE REQUIRMENTS

- Student are expected to attend all lectures and laboratory/field practical's scheduled during a semester. Attendance of a student in a course should be at least 75% of the scheduled classes in a semester, failing which he/she will be debarred from appearing in final examination .For this purpose attendance in theory and practical classes will be counted separately.

EXAMINATION AND EVALUATION

- The academic performance of the student shall be assessed through theory and practical examinations conducted during an academic session.
- Mid- term examinations conducted at college level by the Associate Dean consist of the theory paper of one-hour duration. The semester end theory and practical examinations are of minimum of 3 hours duration.

Total marks assigned to a course will be 150. It will be distributed as given below.

Mid-term examination	20
Practical examination	50
Final theory examination	80
One credit is equal	50 marks

REQUIREMENT FOR THE AWARD OF DEGREE

In order to become eligible for Master degree programme, a student should have passed a minimum credit load of course work, comprehensive examination and research work with a minimum OGPA under 10 point scale as per details below:

Min credit load	Thesis credits	Min OGPA
35	20	6.50

For Master programme minimum passing marks in theory and practical is 60%, but the student has to obtain minimum 6.50 grade for passing in a course.

Requirement of comprehensive examination

- A candidate admitted to Master degree programme must pass a written comprehensive examination covering entire courses of major and minor fields of studies. He/she would be eligible for taking comprehensive examination provided:

a. Has pursued his/her studies at least for two semesters.
b. He/she has completed 75% course work separately in major and minor fields.

6.5.4.6. NCC/NSS/RVC Units

The following B.Sc. (Agri.) volunteers have been admitted to the first year NSS programme during the year 2015-16 to 2019-20.

Table: 42. Numbers of volunteers admitted to NCC programme during last five year-2015-20

Year	No. of volunteers
2015-16	53
2016-17	54
2017-18	54
2018-20	54
2020-21	54

National Cadet Corps

NCC: Total 54 vacancies sanctioned from 9MP Bn Indore for the SD and SW cadets of College of Agriculture, Indore

Regular Activities:

Two days in a week regular parade training for B and C certification programe organized to cadets for learning about the NCC activities (Firing, Physical workout, game, teaching about war, parade etc.). CATC Camp, Army attachment camp and other social activities (Tree plantation, adaptation of statue, cleaning of public park, adaptation of slum area, yoga day, NCC day, Kargil Vijay Diwas, participation in social awareness programme, deputation of cadets for district level activities and celebration and national events) assigned by the group head quarter NCC also carried out.

S. No.	Activity(s)		Cadets				
			2016-17	2017-18	2018-19	2019-20	2020-21
1.	No. of students enrolled		56	54	54	14 (7 SD &7 SW)	53
2.	Exam. passed	22	5	04 Passed (19 appear)	20	14	14
		07	4	05 passed (03 appear	09	21	21
3.	No. of cadets attended the CATC camp		28	30	24	29	23
4.	Army attachment at Gwalior		-	-	02	-	

National Service Scheme (NSS)

Table: 42. Numbers of activities performed in NSS programme during last five year- 2016-21

S. N.	Activity(s)	2016-17	2017-18	2018-19	2019-20	2020-21
1.	No. of students enrolled	193	183	127	127	179
2.	No. of students passed/cleared 'B' certificate examination	52	-	12	17	17
3.	No. of students passed/cleared 'C' certificate examination	-	-	-	01	1
4.	NSS day celebration	65	126	58	110	88
5.	Blood donation camp	65	28	27	36	12
6.	Pulse polio camp	18	75	12	18	10
7.	AIDs awareness day	97	107	28	126	98
8.	Betibachoabhiyan	48	150	30	85	55
9.	Malnutrition day	35	20	7	28	35
10.	Parthenium eradication day	264	170	55	03	15
11.	Special camp	02	88	38	08	-
12.	Voter ID awareness camp	48	50	135	03	-
13.	State level camp	-	2	1	02	-
14.	Unit camp	50	44	-	45	-
15.	RastriyaYuva Day	126	68	60	65	65
16.	Sansetization day	55	35	20	25	115
17.	Environment day	122	109	49	150	50
18.	Plantation day	111	75	68	190	75

Special Camp Activities:

Name of the camp	Venue	Period	No. of participants
2016-17	Piwadaya	16-22/02/2017	61
2017-18	Sunvani Karad	20-26/02/2018	62
2018-19	NA	NA	NA
2019-20	Banediya	10-16/02/2020	66
2020-21	NA	NA	NA

Regular Activities:

1. The series of guest lectures on various topics are being organized for the overallsocial and personality development of the NSS volunteers.
2. Celebration of various days from time to time *viz.*, International Yoga day, Teachersday, World AIDS day, and NSS Foundation day, Independence Day, Republic day, International Women's day, etc.
3. Every year the tree plantation programme is being organized during the month ofJune and July.
4. Every year the blood donation programme is being organized and volunteers donateblood enthusiastically.
5. Undertaking *Shramdaan*/ Cleaning campaign from time to time under the "*SwachhBharat Mission*" in which the college campus, hostel premises, lecture halls, roads,civil hospital etc. are kept clean and tidy and the collected dried leaves and otherbiomass is used for composting.
6. Collection of glass and plastics is done regularly and the collected plastic is beingsent for recycling.

Special Camp Activities:

The seven days' residential special camp is being organized every year in the adopted village where various programme are undertaken as follows:

1. Cleaning of roads, schools, temples and *gram panchayat* premises.
2. Guest lectures on various topics.
3. Tree plantation programme.
4. Animal vaccination programme.
5. Rallies for awareness on various social issues among the public.
6. Cultural programme on social theme.
7. Visits to different places for social development of volunteers.

Scholarships Received

Table: 44. Scholarships received to students

S. N.	Name of Fellowship/Scholarship	No. of Students				
		2016-17	2017-18	2018-19	2019-20	2020-21
1	National Talent	**3**	**9**	**9**	**9**	**13**
2	Scholarship of Vikramaditya Yojna	**Nil**		**2**	**Nil**	**-**
3	Medhavi, Sambal Yojna	-			**37**	**69**
4	State Government Scholarship					
	(i) OBC	**111**	**107**	**123**	**142**	**145**
	(ii) SC	**47**	**46**	**59**	**58**	**54**
	(iii) ST	**68**	**60**	**36**	**48**	**54**

6.5.4.7. Language Laboratory

The majority of the students (80%) are from tribal area. The students lack communication skills as they are weak in English. With an aim to have command and proficiency on language conventional mode of instruction has been adopted for teaching English and communication skills to the undergraduate students of B.Sc. (Agri.).Students are encouraged to communicate in English in the college as well as outside. Extra classes for enhancement of communication skills, improvement of vocabulary etc are conducted so that the students can benefit from them.

6.5.4.8. Cultural Center

College of Agriculture, Indore has one cultural hall. Different instruments *viz., Tabla*, Harmonium, Dholki, *Dhol, Lezim*, Saxophone *etc*. are kept for the use of the students. Students of this college use this facility for learning and playing different instruments. They also use cultural hall for their practice and preparation for participation in different events like Inter collegiate cultural activities, state level debate and elocutions competitions etc.

6.5.4.9. Personality Development

Personality Development Activity

- Three Days Workshop on Leadership Training and Team Building Skills, 22-24 Aug, 2016
- MP-Jica Project "Maximization Of Soybean Production In Madhya Pradesh" Nutrient Uptake Evaluation by Rhizosphere, 23-24th August 2016
- Orientation Workshop, Universal Human Values (8-10 December 2016)
- Personality Development classes for spoken English, GD Module, and body language was conducted for better performance of the students in competitive examinations.
- Three Days Workshop on Leadership Training and Team Building Skills 24 Aug, 2016
- Lecture on the “Skill Development in Agriculture”. Dated: September 06, 2016
- Orientation Workshop on Universal Human Values 8-10 December 2016




6.5.5 PHYSICAL FACILITIES

6.5.5.1 Hostels

Table: 46. Details of hostel facility available

SN	Name of Hostel	No. of Hostel	Total capacity	Students/per room
1	Boys hostel	02	160	2
2	Girls hostel	02	120	02

Table: 47. Facilities available in the hostel

Particular	Boys Hostel	Girls hostel
Mess facility	Available-01 Contractual-01	Available-01 Co-operative mess
Drinking water	Water cooler with water filter -1	Water cooler with filter-1
Indoor games	Available Chess Table Tennis	Available Chess Table Tennis
Hot water	Solar system	Solar system
News paper	Hindi & English news papers	Hindi & English news papers

Cleaning

The cleaning of hostel premises is being done with the help of contractor. The cleanliness in the hostel premises is maintained and monitored regularly by supporting staff. The students and staff participated in cleanliness drive in the hostel.

Transport facility

In case of emergency the college bus & vehicles are made available for immediate medicationand exposure visits to the student.

6.5.5.2. Examination hall

Table: 48. Details of examination hall facility

Building	No. of halls	Capacity
Examination Hall	01	180
Class room	04	82 /class room

6.5.5.3. Sports and Recreation Facilities

Table: 49. Sports facilities available

Games & Sports	Equipment and Infrastructure	Area (Sq.ft.)
Outdoor sport		
Kho-kho	Kho-Kho Ground	4992.64
Cricket	Cricket Ground	159786.00
Kabbadi	Ground	1743.12
Volley Ball	Ground	1743.12
Indoor sport		
Table Tennis	Table -	1 no

Department of Sports and Games, College of Agriculture, Indore has successfully organized Inter-collegiate Indoor Games (Badminton, Table Tennis, Carom and Chess) Tournament in the year 2015-16. The teams of Indoor Games were participated in Inter-collegiate Indoor Games Tournament held at B.M. College of Agriculture, Khandwa in the year 2016-17, 2017-18, 2018-19 and 2019-20. In this tournament the performance of the teams was as follows:

Mr. Vijay Jamodkar	Gold Medal in Shot-put
Miss. Neha Patel	Gold Medal in 800 m
Mr. Suresh Chouhan	Gold Medal in Long Jump
Mr. Vijay Jamodkar	Gold Medal in Discuss
Mr. Suresh Chouhan	Gold Medal in Javelin

Year	Badminton		Table Tennis		Carom	
	Male	Female	Male	Female	Male	Female
2016-17	Runner	Winner	Winner	Winner	-	-
2017-18	Runner	Winner	Runner	Winner	Runner	-
2018-19	Runner	-	Runner	Runner	Runner	-
2019-20	Runner	-	-	-	-	Runner

Inter-collegiate volley ball and Kho-Kho tournament was also organized by College of Agriculture, Indore in the year 2015-16. The teams of Volley Ball and Kho-Kho were participated in Inter-collegiate Indoor Games Tournament held at B.M. College of Agriculture, Khandwa in the year 2016-17, 2017-18, 2018-19 and 2019-20. The Kabaddi tournament was held at College of Agriculture, Gwalior in the year 2015-16 to 2019-20. In this tournament the performance of the teams was as follows:

Games	Boys				
	2016-17	2017-18	2018-19	2019-20	2020-21
Volley ball	Winner	Runner	Runner	-	Covid-19 protocol
Kho-Kho	Runner	Runner	-	-	
Kabaddi	-	-	Runner	Runner	

Intercollegiate athletics meet was organized by the College of Agriculture, Gwalior in the years 2015-16 to 2019-20. The college athletics team wins 13 gold, 34 silver and 30 bronze medals totaling to 177. Out of these 02 gold, 20 silver and 14 bronze medals were won by girl players. The details of the same are as follows:

Games	Boys	Girls

	16-17	17-18	18-19	19-20	20-21	16-17	17-18	18-19	19-20	20-21
100	Silver	Bronze	Bronze	Silver	Covid-19 protocol	Bronze	-	Silver	Silver	Covid-19 protocol
200	Silver	-	Silver	Silver		Bronze	Bronze	Bronze	Bronze	
400	Bronze	-	-	Gold		Silver	Silver	-	Silver	
800	-	-	-	-		-	Bronze	Gold	Silver	
1500	-	-	-	-		Bronze	Silver	Silver	Bronze	
Relay	Silver	Bronze	Bronze	Bronze		Silver	Silver	Silver	Bronze	
Long Jump	Gold	Gold	Gold	Silver		Bronze	Silver	Silver	Silver	
High Jump	Silver	Bronze	Bronze	Bronze		-	-		Bronze	
Javline Through	Silver	Bronze	Gold	-		Bronze	Bronze	-	-	
Disc Through	Silver	Gold	Gold	Bronze		Silver	Silver	-	Gold	
Shotput Through	Gold	Gold	Gold	-		-	Silver	Silver	Bronze	
Total Gold	**2**	**3**	**4**	**1**		**-**	**-**	**1**	**1**	
Total Silver	**6**	**-**	**1**	**3**		**3**	**6**	**5**	**4**	
Total Bronze	**1**	**4**	**3**	**3**		**5**	**3**	**1**	**5**	
Total	**9**	**7**	**8**	**7**		**8**	**9**	**7**	**10**	

The Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior has participated in AGRIUNISPORTS in 2016-17, 2017-18, 2018-19 and 2019-20. 13, 23, 10, 12 and 03 players from College of Agriculture represented university team in different games.

Day to day management

The college is having Badminton, Table Tenis, Carrom, Chess, Volley Ball, Khao-Kho, Kabaddi, Athletics and Gyming facilities for the college students.The students are using these facilities daily in morning (6-8 am) and in the evening (5-7 pm) daily except Sunday. On Sunday the sports complex remains opened from 6 to 8 am only.

The College is not having separate space to accommodate Table Tenis, Carrom and Chess due to which the practices of all Indoor Games hinders as these are placed in Badminton Hall to facilitate the students of the college. The Athletics ground is simply a ground having black cotton soils which tuns in to bad shape during summer and rainy season due to swelling and shrinking problem of the soil. The ground needs construction of Running Track and Arernas for Javaline, Discuss & Shotput Throughs along with Long and High Jump Facilities. Hence there is a need to strengthen these facilities so that the college students will performe better at State as well as National level.

6.5.5.4. Auditorium

The auditorium is used for educational and co-curricular activities every fortnightly. Lectures on Career Development, Personality Development and Motivational Development are organized by Eminent Personals in different fields.

6.5.5.5. Exhibition Hall/Museum

Table: 50 Exhibition hall / museum facility

Name of Department	Name of Exhibition Hall	Purpose
College	Exhibition Hall	College has display boards for various ornamental plants, varieties, improved cultivation practices, methods of irrigations, soil and water conservation devices, Farm Machinery tools, agro meteorological instruments, garden tools and implements, seed samples, various crop Pest , diseases, animal component, procedure of soil sampling, soil& water analysis, communication skills, pamphlet, booklets etc.

6.5.6. RESEARCH FACILITIES

College has Post graduate degree programmes. So separate staffs are sanctioned for research.

Name of Department	UG/ PG Laboratory
Plant Pathology	**Regular, molecular plant pathology, research on mushroom, lab facilities available in the section, epidemiology, wilt sick plot and other required field resources also available with the Section.**

6.5.6.1. Undergraduate/ Post Graduate Laboratories and Equipment's

Table: 51. List of equipment's available in different division laboratories

Name of Department	UG/ PG Laboratory	Equipment's
Soil Sc & Agricultural Chemistry	**2**	Flame Photometer, Yadder Apparatus, UV Spectrophotometer, EC meter, pH meter, Shakers etc. Glassware & chemical
Horticulture	**1**	1- Electronic balance 2- Deep freeger 3- Weighting machine 4- Packaging machine 5- Electronic oven

Agronomy	**1**	Leaf Area Meter with Store Cover 64 GB and Battery Backup, Auger with handle, Soil Auger Tube, Lux Meter, Analytical weight, Spring balance pocket, Seed grinder, Seed drill wheel hoe, Cut Throat Flume, Screw auger, V Notch, Lab black board, Electronic pan balance, Hot air oven, Over head projector, White board, Seed cum fertilizer drill, Steel l boxes (Soil Sample), Multimedia projector
Plant Breeding & Genetics	**1**	Seed Germinator, Binocular microscope, Dissecting microscope, Laminar airflow, BOD incubator, Autoclave, Hot air oven, Centrifuge, pH meter.
Plant Pathology	**1**	Autoclave, Bio-safety cabinet, Hot air oven BOD, Microscopes, pH meter, refrigerator, colony counter, distillation unit, ELISA, PCR, Electrophoresis, Gel documentation, Spectrophotometer
Entomology	**1**	Dissecting tray with wax size 18x12", Dissecting binocular microscope, IRL make magnifying stands with lens, Chinese microscope, Research microscope, Camera Lucida

Lists of major farm facilities/ Research facilities in the Dept

S.N.	Department/ Section	Farm Facilities/ field facilities available for Research work in the Dept.
1.	Horticulture	2.5 Acre
2.	Agronomy	

Lists of other instructional units in the Horticulture Department

S.N.	Instructional Units	Number
1.	Poly house	01
2.	Nursery	01
3.	ELP Processing unit	01

6.5.6.2. Research Contingencies

Year	Research Contingency (Rs.)	Whether it meets the student demand
2016-17	**-**	**-**
2017-18		
2018-19	**580000**	**Yes**
2019-20	**650000**	**Yes**
2020-21		

6.5.7 OUTCOME/OUTPUT

6.5.7.1. Student Performance in National Examinations

Table: 53. Student performance in National Examinations

SN	Year Number of students qualified competitive exams							Number of students passed out
	JRF	SRF	NET	ARS	PG	Ph.D.	OTHER	
2016-17	-	-	6	1	1	1	-	
2017-18	-	-	-	-	-	1	-	
2018-19	6	3	-	-	-	-	-	
2019-20	-	1	-	-	1	-	5	
2020-21								

6.5.7.2. Students Placement Profile

Table: 54. Profile of student placements

Degree	Discipline	ICAR	CAU/ SAU	Central Govt.	State Govt.	PDF/ Foreign	Pvt./Others Banks and Companies
Year 2016-17							
B.Sc.Ag	-	-	-	-	-	Nil	22
M.Sc.Ag	Plant Breeding Agronomy Horticulture Entomology Extension Economics	21	1 SAU(Raj. Agri Univ.) 2 Pvt. University (APJ Indore B R Ambedkar Mhow)	4 (Central Warehousing and Logistics)	4 (Rangers in Forest) 2 (MP Seed and Farm Development Corporation)	-	46
PhD	Entomology	-	-	-	-	-	1 Bayer Crop Science
Total		**03**	**03**	**04**	**06**	**-**	**69**
Year 2017-18							
B.Sc.Ag	-	-	-	-	-	Nil	25

M.Sc.Ag	Plant Breeding Agronomy Horticulture Entomology Extension Economics	2 1	1 SAU(Raj. Agri Univ.) 2 Pvt. University (APJ Indore B R Ambedkar Mhow)	02 (Central Warehousing and Logistics)	4 (MP PSC 2 (MP Seed and Farm Development Corporation)	-	55
PhD	Entomology	1	-	-	-	-	01
Total		**04**	**03**	**02**	**11**	**-**	**81**
Year 2018-19							
B.Sc.Ag	-	-	-	-	-	Nil	25
M.Sc.Ag	Plant Breeding Agronomy Horticulture Entomology Extension Economics	2 1	1 SAU(Raj. Agri Univ.) 2 Pvt. University (APJ Indore SAGE)	4 (Central Warehousing and Logistics)	4 (ACF in Forest) 2 (MP Seed and Farm Development Corporation)	-	55
Total		**03**	**04**	**05**	**02**	**-**	**80**
Year 2019-20							

M.Sc.Ag	Plant Breeding	1	7 SAU Univ. 12 Lecturership in Private. Univs. SAGE, Vaishnav Medicaps, Oriental Indore	2 (Central Warehousing and Logistics)	2 (MP Seed and Farm Development Corporation)	-	5
Total		**01**	**19**	**02**	**02**	**-**	**24**

2020-21

S.N.	ICAR	CAU/SAU	Private Seed Companies	State Govt.	PDF/ Foreign	Pvt./Other Banks
M.Sc.Ag	1	2 SAU Univ. 4 Lecturership in Private. Univs. SAGE, Vaishnav Medicaps, Oriental Indore	3	-	-	2
Total	01	06	03	-	-	02

Entrepreneurs from the campus

1. **Shri Ajit Kelkar,** Organic Scientist & Agripreneur of India, CEO Abhinav AHRDF organic
2. **Shri Dinesh Patel**, Co-founder and Director of Agrius India Pvt. Ltd.
3. **Shri Deepak Patidar,** CMD Goatwala farm and Goat farming expert
4. **Shashank Sirsagar,** Owner of Devila Landscaping
5. **Dharmendra Patidar,** Nursery & Hi-tech farming expert, Founder of Shubh-labh krishi sewa kendra
6. **Lovlesh Nagori,** Founder & CEO of KMN Agri-business solutions pvt. ltd.
7. **Rupesh Jain,** Director of Evergreen Rooftop Agritech, Indore
8. **Dilip Dandir,** Business
9. **Naval Raghuwanshi,** Director of Naval Coaching Institute
10. Amit Mishra, Co-founder and director of Agrius India pvt. ltd.
11. Mukesh Jat, Director of MG Coaching Institute, Indore
12. Lokesh Sitole, Om Krishi Sewa Kendra
13. Shivam Gour, Food processing business
14. Mr. Seemant, Owner Family Farmer Food Market

The Green Degree Programme has been started in our University during year 2019-20

And the plantation was done by the UG and PG students of academic session 2019-20

The following committee has been constituted by the Gean for the conduction of the programme activities

1, Dr N K Gupta , Nodal officer

2. Dr N S Thakur , I/C Academic

3. Dr R K Singh , I/C , NCC

4. Dr H L Khapediya, I/C , NSS

5 Dr S C Tiwari , I/C , Sports

During the first year the plantation work was under taken as under

S No	Nodal Officer	Expected students	No. of plants	Name of plant	Site of plantation	Survival of plants at the end of year
1	N K Gupta H S (Horticulture)	UG- 80	80	Khamer - 60 Ashok 20	Both the sides of campus main road	72 %
2	-	PG -90	90	Khamer- 50 and Teak 40	In between the boundary of Farm area and IARI - Wheat research centre	65 %
		Total	170			68.5 %

Platation of khamer plants by UG students	

Preparation for plantation programme by PG students

Plantation by PG students


Present condition of two years old plants

Note - The gape filling in place of the damaged / dead plants is being done this year

6.5.7.3. Awards/Recognitions/Certificates

Table: 55. List of students given certificates

Name of Student	Year	Awards/Recognitions/Certificates
Rahul Yadav	2017-18	University Gold Medal
Ku. Rini Shrivas	2017-18	Sartaj Bahadur Sinha memorial cash - I prizes
Ku. Rini Shrivas	2017-18	Late G.R. Gokhle memorial cash prize
Divya Bhayal	2017-18	Sartaj Bahadur Sinha memorial cash - II prizes
Aakash Kushwah	2018	"Paramount Award 2018 Agronomy" for the Topmost Performance in Master's Degree Course of Agriculture
	2018-19	"Lt. G. R. Gokhale Memorial Cash Prize 2018-19 award" for obtaining the highest OGPA in the first attempt in the Post Graduation degree programme
	2019	"Consolation Prize award" in the National Essay Writing Competition on the subject "Agricultural Waste to Wealth"
	2019	"Best presentation award" (Oral) in the 1st STUDENTS AGRICULTURAL RESEARCH CONFERENCE (SARC) "Cotyledon - 2019"
	2019	"Best poster presentation award" in the "International Conference on Sustainable Agricultural Development in Changing Global Scenario"
	2020	"Best poster presentation award" in the "5th Uttar Pradesh Agricultural Science Congress - Enhancing Farmer's Income and Water Conservation: Opportunity and Challenges"
	2020	University Best Thesis Award 2019-20

Nimisha Raj Jain	2019	Best poster award in National Seminar on Advances and Challanges in Horticulture Feb 26-27,2019 organized by Dept. Of Horticulture, J.N.K.V.V., Jabalpur

Honors / Awards / Recognition to the centre

- **AICRP on Dryland Agriculture, Indore centre recognized Most responsive centre during 2011-12 and a certificate was given by** ICAR-Central Research Institute for Dryland Agriculture, Hyderabad (A,P).
- Best AICRPDA Centre Award for 2013-2014 honour given to Indore centre by ICAR - Central Research Institute for Dryland Agriculture, Hyderabad (A,P) ON 27 December ,2014.
- Shri.Laxman Singh Chouhan of village Panod, district: Indore in 2012 has conferred the award for their inventive work in the field of Rain water harvesting and it's Management from ICAR at CRIDA, Hyderabad.
- Shri. Pradeep Shredhey of village Barlai, District Indore in 2012 has conferred the award for their inventive work in the field of Energy Conservation and its Management from ICAR at CRIDA, Hyderabad.

Faculty Award

Table: 56. Details of faculty award received during year 2013-18

Name of Faculty	Year	Awards/Recognitions/Certificates
Dr. R.K. Singh	2020	Young scientist associate award
Dr Narendra Kumawat	2017	Best Scientist Award 2017
Dr Jitendra Patidar	2020	Fellowship for Training of Young Scientist
Dr. Bharat Singh	2015	Distinguished Scientist Award, RVSKVV, Gwalior
Dr. Bharat Singh	2016	Distinguished Scientist Award, ICAR-IIRR, Hyderabad
Dr. Bharat Singh	2017	Outstanding Achievement Award, Shri Venketeshwara Veterinary University, Tripati
Dr. Swati Barche	2020	BIOVED YOUNG SCIENTIST ASSOCIATE AWARD 2020 on the 22 nd Agricultural Scientists and Farmers Congress on PHT & Management for empowering the rural society and Employment Generation on 22-23 Feb,2020 at Prayagraj
Dr. Swati Barche	2016	DISTINGUISHED FACULTY AWARD ,Venus International Foundation, Chennai
Dr. Swati Barche	2014	YOUNG SCIENTIST ASSOCIATE AWARD Bioved Research Institute of Agriculture & Technology, Allahabad,
Dr. Swati Barche	2014	ACHIEVER AWARD SADHNA society, Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan 173230 Himachal Pradesh, INDIA
Dr. Swati Barche	2014	FELLOW OF ASSOCIATION for the Advancement of Biodiversity Science, Karnataka
Dr. Swati Barche	2014	.FELLOW OF EURASIAN Academy of Environmental Sciences, Karnataka
M.P.Jain	2012	John Della Fazey Evelyn Bautour Hill Ty'n y CaeanBanor LL574 BD,wales,UK
M.P.Jain and team	2015	Dr.Jagpal Singh, Director IIFSR, Modipuram, Meeruth, UP 09412234958
M.P. Jain and team	2015	Dr. L.M. Garnayak Chief Agronomist, AICRP on IFS, OUAT, Bhubaneswar 09861155313
Jain NR and Barche, S	2018	Poster Presentation
H .L Khapediya	2018	World book of records
Dr. Sanjay Kumar Sharma		Certificate of Honour from ICAR for valuable contribution in AICRP on "Tillage requirement of Major Soils of India" • Conferred honorary fellowship of the Society of Life Sciences for outstanding contribution in the field of life sciences. • Received certificate of appreciation in recognition of outstanding contribution in the successful organization of the 8th Annual convention of the Indian Society of Soil Science, New Delhi, by the organizing secretary of the society. • Awarded poster session II prize in the World's First Global Ravine Conference on Managing Ravines for Food and Livelihood Security (GRC

		2016) – held at RVSKVV, Gwalior During March 7-10, 2016 • Awarded poster session III prize in the World's First Global Ravine Conference on Managing Ravines for Food and Livelihood Security (GRC 2016) – held at RVSKVV, Gwalior During March 7-10, 2016 • Best Paper Award - poster session (III Prize) in National Seminar on Climate Change. • Awarded 'UTKARSHA SEWA SAMMAN' by College of Agriculture, Indore. Awarded 'UTKARSHA SEWA SAMMAN'by M.P. Government Officers and Employees Welfare Association (Reg. No. 15056).
Dr. H.S. Thakur	2012	Rashtra Ratan Award-2012
Dr. H.S. Thakur	2012	Glory of India Award-2012
Dr. H.S. Thakur	2000	20th Crop Research Award
Dr. H.S. Thakur	2013	Rajeev Gandhi Excellence Award
Dr. D.H. Ranade	1992	M.P. Young Scientist's Award
Dr. D.H. Ranade	2000	20th Century Young Agricultural Scientist Award
Dr. D.H. Ranade	2009	Dr VRN Award
Dr. D.H. Ranade	2016	Best research article award in Journal of Agriculture research and technology volume 39(2014)
Dr. N.S. Thakur		• **Received Reviewer Excellence Award for Legume Research Journal** • **Certificate of appreciation for Collaborative work in the Development of Sorghum Variety RVJ 1862**
Dr. Narendra Kumawat		• **Young Scientist Award 2017** • Awarded for **excellent contribution** to Current Agriculture Research Journal as **Reviewer** • Awarded Certificate of **Excellence in Reviewing** for "**Asian Journal of Agricultural Economics and Sociology**" 2019. • Awarded Certificate of **Excellence in Reviewing** for "**Journal of Experimental Agriculture International**" 2019. • **Young Agronomist Award 2020**
Dr. Jitendra Patidar		• Awarded **Fellowship for training of Young Scientist** by M.P. Council of Science and Technology

6.5.7.4. Employability

With the implementation of the V Dean's Committee since 2017-18 Agricultural Education has been able to gain new momentum and it has opened up new horizons for the students of the Agricultural Universities.

Since the inception, students of the College of Agriculture, Indore are being trained in Agronomy, Animal Husbandry and Dairy Science, Plant Physiology, Agricultural Economics, Entomology, Engineering, Extension, Horticulture, Plant Pathology, Soil

Science &Agricultural Chemistry and Statistics. Regarding professional employability, which is in demand in the present scenario, students are imparted intensive training related to technical, entrepreneurial, communication skills, leadership skills and a well-developed personality. In order to meet these, during the first six semesters students get instructions and training in all the above subjects and in Semester VII they undergo RAWE and in the final semester they are imparted training in Experiential Learning. After the completion of the undergraduate degree programme, the students of this college become adept in plant disease diagnosis, farm advisory and production practices, dairy and poultry farming, advanced irrigation systems for water management, organic farming, and agro-entrepreneurial skills. Students find placement in the Central and State governments through various competitive examinations while a large number of students get placed inthe private sector organizations and Government of India Undertakings such as the finance sector. Team work, leadership qualities and interpersonal skills help to refine the students in their post academic career and other endeavours thus helping in their holistic development.

6.5.9. Certificate (Applicable when SSR is submitted for Programme)

I, the **Dean, College of Agriculture**, **Indore** hereby certify that the information contained in **Sections 6.4 and Section 6.5.1 to 6.5.7.4** is furnished as per the records available in the college and degree awarding university.

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

All India Coordinated Research Project for Dryland Agriculture
Central Research Institute for Dryland Agriculture
Santhoshnagar, Hyderabad 500 059 , India

Certificate

This is to certify that RVSKVV, AICRPDA Main Centre, Indore has been the *Most Responsive Centre* in timely submission of the scientific, technical and administrative information to the AICRPDA Project Coordination Unit at CRIDA, Hyderabad, during the year 2008-09

(PK Mishra)
Project Coordinator, AICRPDA

(B Venkateswarlu)
Director, CRIDA

All India Coordinated Research Project for Dryland Agriculture
ICAR- Central Research Institute for Dryland Agriculture
Hyderabad,India

Best AICRPDA Centre Award 2014

has been awarded to
AICRPDA Centre, Indore , RVSKVV,
for outstanding contribution in dryland research
during the Biennium **2012-13 & 2013 -14**

AICRPDA

(Ch. Srinivasa Rao)
Director, CRIDA

PROGRAMMES

Undergraduate 4 year degree programme: B.Sc.(Hons.) Agriculture

Post Graduate 2 year degree programmes:

1. M.Sc. (Ag.) Agronomy
2. M.Sc. (Ag.) Plant Pathology
3. M.Sc. (Ag.) Soil Science & Agricultural Chemistry
4. M.Sc. (Ag.) Genetics & Plant Breeding
5. M.Sc. (Ag.) Entomology
6. M.Sc. (Ag.) Agricultural Extension & Communication
7. M.Sc. (Hort.) Vegetable Science
8. M.Sc. (Ag.) Agricultural Economics

PROGRAMME – 1

B.Sc.(Hons.) Agriculture

4 Year Degree Programme


ग्रामीण उद्यमिता एवं जागरूकता
विकास योजना
(READY)
कृषि महाविद्यालय, इन्दौर
वर्ष- 2019-2020
ग्राम - काँकरिया चाँद त.तरान

FOR THE COLLEGE OFFERING DEGREE PROGRAMME AS PER RECOMMENDATIONS OF V DEAN COMMITTEES/VCI/BSMA

6.4.1. BRIEF HISTORY OF DEGREE PROGRAMME

(a) Year of starting of UG degree programmes: 1959

Indore being an educational and a commercial hub enjoys the enviable status in Madhya Pradesh, the heart of the country. Its history depicts a rich and prosperous agricultural production. The year 1924 will always be known as a land mark for, the Institute of Plant Industry came into existence, to enhance the agriculture production and research opportunities. Scientists like Dr. Howard of international repute rendered their services in the institute. The hard work and dedication of the scientists of the institute impressed many eminent people including the father of the nation Mahatma Gandhi, who visited the institute to see the Indore Method of Composting already acknowledged by the world all over.

With the passage of time, in the year 1959 a major change took over, the establishment of the Government College of Agriculture with the merger of Institute of Plant Industry which has contributed significantly in the field of teaching, research and extension. With the establishment of Jawaharlal Nehru Krishi Vishwa Vidyalaya in the year 1964 at Jabalpur the College of Agriculture, Indore became its offshoot. Since then it has earned a place of distinction, thanks, to the numerous innovative research activities and teaching learning processes. In the year 2008 with the existence of Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior the College of Agriculture, Indore became an integral part of this new university.

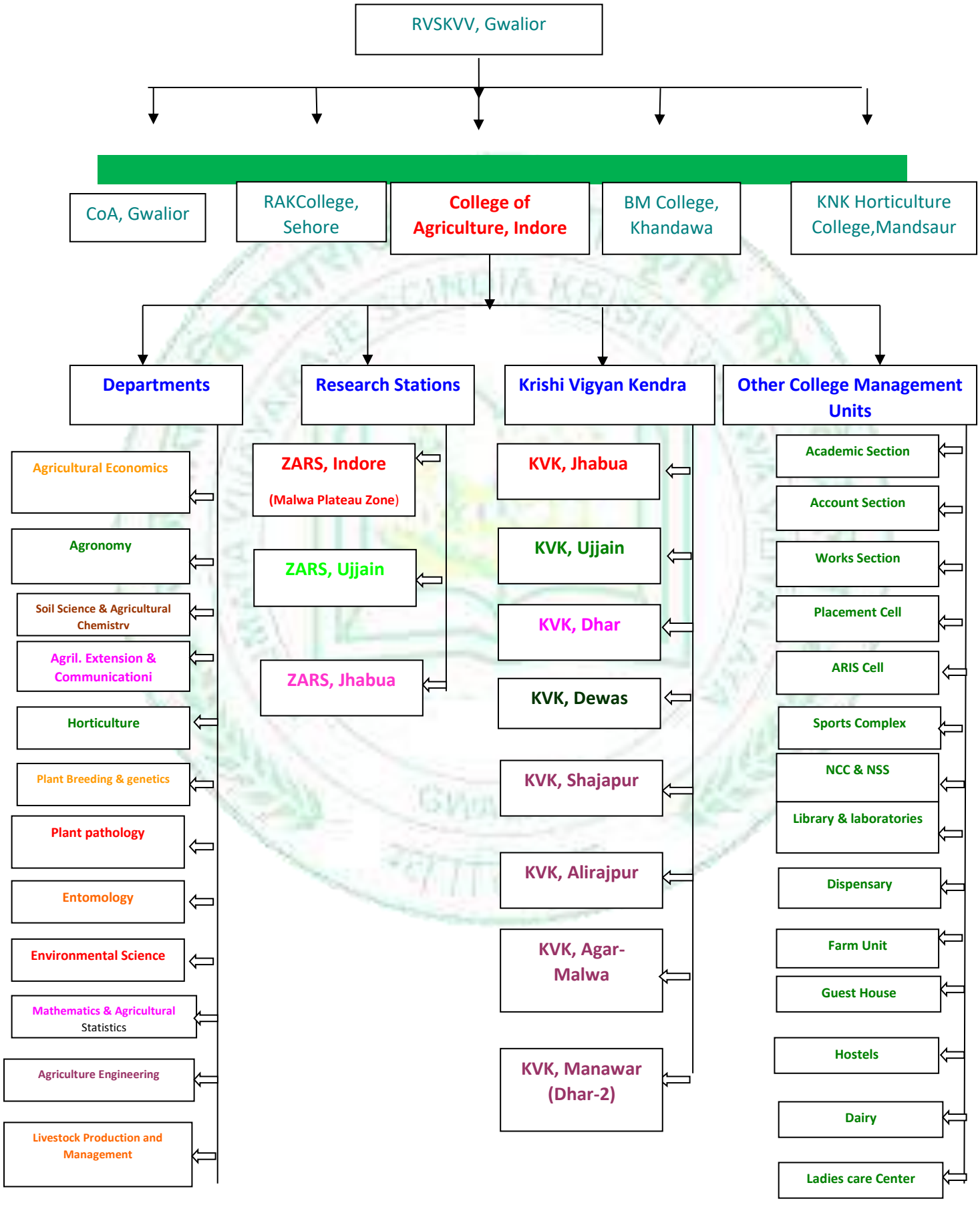
(b) RESEARCH STATIONS & KRISHI VIGYAN KENDRA

(A) Research stations:

1. **Malwa plateau zone**
   - Zonal Agricultural Research station -Indore
   - Zonal Agricultural Research station - Ujjain
2. **Jhabua hills Zone**
   - Zonal Agricultural Research Station - Jhabua

(B) Krishi Vigyan Kendras: Jhabua, Ujjain, Dhar, Manawar (Dhar-2), Shajapur, Dewas, Alirajpur & Agar-Malwa

ORGANIZATIONAL SETUP OF COLLEGE OF AGRICULTURE, INDORE



(c) Linkages and Collaborations:

Linkages and Collaborations are there with many government and non-government agencies for conducting location specific research, extension of technologies for the end users, employment of the students etc. Major agencies are:

- ICAR
- Department of Farmers welfare & Agriculture Development.
- National Horticulture Board.
- National Medicinal Board.
- India Meteorological Department.
- Private Sectors.

(d) Mandates:

To conduct teaching for UG & PG in Agriculture, carryout research for technology generation and Extension of technology for enhancing productivity, profitability and sustainability of agricultural production systems and quality of rural livelihood in the state of Madhya Pradesh.

Accomplishments

Table: 1. Number of students passed and placed various sectors in 16-17 to 20-21

SN	Year Number of students qualified competitive exams							Number of students passed out
	JRF	SRF	NET	ARS	PG	Ph.D.	OTHER	
2016-17	-	-	6	1	1	1	-	143
2017-18	-	-	-	-	-	1	-	139
2018-19	6	3	-	-	-	-	-	148
2019-20	-	1	-	-	1	-	5	114
2020-21	-	-	-	-	-	-	-	127

Outstanding Scholar of College:
Mr. Subhash Yadav, Former Deputy Chief Minister of Govt. of Madhya Pradesh

Students Placement

Degree	Discipline	ICAR	CAU/SAU	Central Govt.	State Govt.	PDF/ Foreign	Pvt./Others Banks and Companies
Year 2016-17							
B.Sc.Ag	-	-	-	-	-	Nil	22

M.Sc.Ag	Plant Breeding Agronomy Horticulture Entomology Extension Economics	2 1	1 SAU(Raj. Agri Univ.) 2 Pvt. University (APJ Indore B R Ambedkar Mhow)	4 (Central Warehousing and Logistics)	4 (Rangers in Forest) 2 (MP Seed and Farm Development Corporation)	-	46
PhD	Entomology	-	-	-	-	-	1 Bayer Crop Science
Total		**03**	**03**	**04**	**06**	**-**	**69**
Year 2017-18							
B.Sc.Ag	-	-	-	-	-	Nil	25
M.Sc.Ag	Plant Breeding Agronomy Horticulture Entomology Extension Economics	2 1	1 SAU(Raj. Agri Univ.) 2 Pvt. University (APJ Indore B R Ambedkar Mhow)	02 (Central Warehousing and Logistics)	4 (MP PSC 2 (MP Seed and Farm Development Corporation)	-	55
PhD	Entomology	1	-	-	-	-	01
Total		**04**	**03**	**02**	**11**	**-**	**81**
Year 2018-19							
B.Sc.Ag	-	-	-	-	-	Nil	25
M.Sc.Ag	Plant Breeding Agronomy Horticulture Entomology Extension Economics	2 1	1 SAU(Raj. Agri Univ.) 2 Pvt. University (APJ Indore SAGE)	4 (Central Warehousing and Logistics)	4 (ACF in Forest) 2 (MP Seed and Farm Development Corporation)	-	55
Total		**03**	**04**	**05**	**02**	**-**	**80**
Year 2019-20							
B.Sc.Ag	-	-	-	-	-	Nil	-

M.Sc.Ag	Plant Breeding	1	7 SAU Univ. 12 Lecturer ship in Private. Univs. SAGE, Vaishnav Medicaps, Oriental Indore	2 (Central Warehousing and Logistics)	2 (MP Seed and Farm Development Corporation)	-	5
Total		**01**	**19**	**02**	**02**	**-**	**24**

S.N.	ICAR	CAU/SAU	Private Seed Companies	State Govt.	PDF/ Foreign	Pvt./Other Banks
M.Sc.Ag	1	2 SAU Univ. 4 Lecturer ship in Private. Univs. SAGE, Vaishnav Medicaps, Oriental Indore	3	-	-	2
Total	01	06	03	-	-	02

Gold medals/ Awards

S. N.	Degree Programme	2016-17	2017-18	2018-19	2019-20	2020-21
1.	B.Sc.(Hons.) Ag.		4	6	1	-
2.	M.Sc. (Ag.) Lt. G.R. Gokhle Cash Prize	1	1	1	1	-

6.4.2. FACULTY STRENGTH

Table: 2. Faculty strength (2020-21)

6.4.2.1. College

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**4**	**0**	**1**
2	Associate Professor	**1**	**1**	**2**
3	Assistant Professor	**1**	**20**	**26**

CAS professor

As per faculty recommended by ICAR the faculty strength is not sufficient. However, the Research staffs, extension staff, contractual faculty, guest faculty, adjunct

faculty are being appointed to complete the curriculum of the undergraduate and post graduate degree programme.

6.4.2.2. Research and Extension

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR
1	Professor/ Pr. Scientist	**1**	**1**	**2**
2	Associate Professor/ Sr. Scientist	**6**	**5**	**11**
3	Assistant Professor/ Scientist	**9**	**13**	**12**
4	Contractual/ Retired teachers	**8**	**-**	**-**

6.4.3. TECHNICAL & SUPPORTING STAFF

Table: 3. Information of Technical & Supporting Staff
College

	Sanctioned	Filled	Vacant
Dean	1	1	0
Establishment			
A.D.A.	1	1	0
Assistants	9	8	1
Steno Grapher	1	0	1
Jr. Computer	1	0	1
Farm Manager	1	0	1
Agril. Ext. Officer	1	0	1
Mechanic	1	1	0
Black Smith	1	0	1
Carpenter	1	0	1
Electrician	1	0	1
DK/Field Man/ FEO	4	0	4
Tractor Driver	1	0	1
Jeep Driver	1	0	1
Pump Driver	1	0	1
Laboratory staff			
Lab Technician	9	7	2
Lab Attendant	9	0	9
Library Staff			
Librarian	1	1	0
Library Shorter	2	0	2
Student welfare			
P.T.I.	1	0	1
Compounder	1	0	1
Works section			
Asstt. Engineer	1	1	0
Sub Engineer (Civil)	2	1	1

Sub Engineer (Elec.)	1	1	0
Sub Engineer (Work Charge)	4	0	4
	57	**22**	**35**

Research

Establishment	**Sanctioned**	**Filled**	**Vacant**
Asstt. Comptroller	1	0	1
Technical Assistant	8	8	0
Asstt. Grade-1	2	2	0
Asstt. Grade-2	3	3	0
Asstt. Grade-3	2	2	0
Steno Grapher	1	0	1
Jr. Computer	1	1	0
Electrician	1	0	1
DK/Field Man/ FEO	10	9	1
Tractor Driver	1	1	0
Jeep Driver	2	1	1
Pump Driver	1	0	1
Peon	9	3	6
Laboratory staff			
Asstt. Jr.Soil Chemist	3	1	2
Lab Technician	3	2	1
Observer	1	0	1
Dy. Observer	1	0	1
Lab Attendant	4	1	3
Works section			
Sub Oversear	1	0	1
Draftsman	1	0	1
Asstt. Draftsman	1	0	1
Artist	1	0	1
Wireman	1	0	1
Work Mistri	1	0	1
Tracer	1	0	1
Time Keeper	1	0	1
Pump Attendant	1	0	1
	63	**34**	**29**

6.4.4. CLASS ROOM & LABORATORIES:

Four well-equipped classrooms are made available with this college for UG programs. These are well equipped with audio-visual aids for effective teaching. Different sections of this college also have well-equipped laboratories and separate instrument cell for conducting practical classes of the students. Since the laboratories are equipped with most of the instruments, it also enables staff of this college to carry out research.

Table: 4. Class room available

(a) Undergraduate (UG) Class Rooms

Class Rooms	Smart class room/ interactive Board	Capacity
First year Class room	Smart class room	84
Second year Class room	Smart class room	84
Third year Class room	Smart class room	84
Forth year Class room	Smart class room	84

Table: 5. Number of laboratories available

(c) Section No. of laboratories available for UG& PG

Department	No. of Labs for UG & PG	5 Major equipment's available and their photos
1. Agricultural Extension & Communication	01	TV, LCD, Bus, Computer and Notice Board
2. Agronomy	01	Digital Leaf Area Meter, Hot Air Oven, pH Meter, Electronic Weighing Balance, Soil Auger
3. Entomology	01	Compound microscope, Light trap, Insect incubator, Dissecting microscope, Insect collection boxes
4. Horticulture	01	Temperature and Humidity Meter, Electronic Balance, Oven, Refracto meter, Digital pH meter, Deep Freezer, Sealing and packing machine
5. Plant Breeding	01	Trinocular microscope with image analyser, Laminar Air Flow, Thermal cycler PCR (3 no), RT-PCR, Gel-Doc unit (2 no)
6. Plant Pathology	01	BOD Incubator (04), Laminar Air Flow /biosafety cabinet (03), Autoclave (Vertical and horizontal) (04), Hot Air Oven (03), Refrigerators 4 °C (03), -20°C (03) and -80°C (02)
7. Soil Science and Agricultural Chemistry	01	GPS, BOD incubator, N analyser plant, EC meter, Centrifuge Machine
8. Plant Physiology	01	
9. Agril. Statistics	01	
10. Livestock Prod. & Management.	01	
11. Agril. Engineering	01	
12. Physics		
13. Statistics	01	
14. Other- English		

Table: 6. Average number of students in theory and practical classes

Name of the degree programme	Batch & no. of student in theory	Batch & No. of student in practical
Undergraduate (UG)		
B.Sc.(Ag.) Hons.	1/ 81	3/ 27

The class rooms and laboratories are sufficient to meet course curricula requirement of the degree programmes.

Dimensions of Classrooms:

S.N.	Name of Classrooms	Length (Metre)	Width (Metre)
1.	B.Sc.(Ag.)Ist year	14.70	7.60
2.	B.Sc. (Ag.)IInd year	14.70	7.60
2.	B.Sc. (Ag.)IIIrd year	14.70	7.60
4.	B.Sc. (Ag.)IVth year	11.95	7.60

6.4.5. CONDUCT OF PRACTICAL & HANDS - ON - TRAINING

The undergraduate courses involve conducting practical's as per credits allotted to the specified courses and hands on training and field/lab practicals for courses.

Propagation methods demonstrated. Production Technology of Vegetables and Flower Crops: Maximization of vegetable yield by *viz*., staking, turning, blanching, earthling up. Vegetable Production: commercial production and marketing of various vegetables & preparation of value added products.

Soil analysis for different micro and macro nutrient demonstrated practically. The agro-industries visits comprise of fruit processing, cold storage, post-harvest and marketing management (sorting, grading, and packing), nursery (government and private), agro-service centre, etc.

In the RAWE program students placed in different KVKs i.e. Ujjain, Dhar & Jhabua for 6 months under the supervision of Program Coordinators of KVK's. Every student was allotted 1 host farmer in the adopted villages for his/ her learning experience in the field of crop production, crop protection and extension programs & other activities observed in village from time to time & sharing the experience through rapport building with their host farmers. The RAWE students observed the socio economic problems and agricultural problems, and also conducted farmers group meeting, PRA activities, Krishak Sangoshthi to solve their problems and learnt from them. The following activities were performed by the RAWE students under the supervision of KVKs.

Agricultural activities

1.Demonstration NADEP Making

2. Grafting by students on Mango

3. Gooty (air layering) on Guava

4. Plantation

5. Azolla culture unit

6. Sowing various crop seeds

Demonstration NADEP

Plantation

Azolla culture unit

Sowing various crop seeds

Agro-Industrial Attachment:

Industrial attachment-

1. Preparation of Nursery Bed

2. Seedling preparation

3.Budding in Apple ber

4. Transportation

Preparation of Nursery Bed

Seedling preparation

Budding in Apple ber

Transportation

1. Visit to Krishi bio Product office
2. Quality Control
3.Gram Staining
4. Preparation of powder based bio- fertilizer from pure culture

Krishi bio Product office

Product Gallery

Quality Control

Gram Staining

1-Quality Check In Bio fertilizers.

a. pH Test
b. Moisture Test

1- Method Demonstration Of Gram Staining

2- Visit To Go down Krishi Bio Products & Research Private Ltd

Quality Check In Bio fertilizers

Method Demonstration of Gram Staining

Visit to Godown

Roof water harvesting has been installed at hostels.

6.4.6. SUPERVISION OF STUDENTS IN PG PROGRAMME

NOT APPLICABLE

6.4.7. FEEDBACK OF STAKEHOLDERS (STUDENTS, PARENTS, INDUSTRIES, EMPLOYERS, FARMERS ETC.)

Suggestion and complaint boxes have been installed in the college premises. Regular counselling meetings are organized and in emergency parents are also requested to participate for the personality development of students. Excellent platform and infrastructure has been provided by the college to establish rapport between students and teachers.

कृषि विज्ञान केन्द्र, झाबुआ

(राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय, ग्वालियर)

KRISHI VIGYAN KENDRA, JHABUA, 457 661 (M.P.)

(Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya, Gwalior)

Phone & Fax-07392-244367 e-mail- kvkjhabua@rediffmail.com

No./KVK/2020-21/ 131 Date : 06.08.21

प्रति,

अधिष्ठाता,
कृषि महाविद्यालय, इंदौर

विषय– रावे छात्राओं द्वारा किये गये कार्यों के परिणामों की जानकारी भेजने बाबत।

उपरोक्त विषयान्तर्गत लेख है कि रावे छात्राओं द्वारा वर्ष 2016–17 से वर्ष 2019–20 में अंगीकृत ग्रामों में चयनित कृषकों के साथ किये गये कार्यों के द्वारा आये परिवर्तन की जानकारी निम्नानुसार है–

स. क.	किसान का नाम	अंगीकृत ग्राम	रिमार्क/फीडबैक
1.	श्री मानका पिता पेमला	छापरी	• कृषि कि उन्नत तकनीकि की विस्तार से जानकारी प्रदान की। • समय पर बीज उपचार एवं कीट प्रबंधन की जानकारी प्रदान की।
2.	श्री कसना पिता कालीया	छापरी	• अधिक उत्पादन वाली किस्मों एवं मृदा व वातावरण अनुकुल किस्मों की जानकारी प्रदान की।
3.	श्रीमति सबु पति छगन	छापरी	• कृषि से संबधित सह व्यवसाय जैसे पशुपालन, मुर्गीपालन, बकरीपालन आदि के बारे में जानकारी प्रदान की। • समय समय पर कृषि विशेषज्ञों की सलाह लेने के बारे में जानकारी प्रदान की। • अपने सार्वजनिक जीवन में साफ–सफाई एवं कृषि के साथ जीवन में शिक्षा के महत्व के बारे में जानकारी प्रदान की।
4.	श्री रतनसिंह पिता गलाल	छापरी	• फसलों कि विभिन्न अवस्थाओं पर आवश्यतानुसार कीटनाशकों, फफूंदनाशकों, खरपतवार नाशकों का उपयोग के बारे में जानकारी प्रदान की।
5.	श्रीमति गीता पति राजेश	हत्यादेली	• उन्नत कृषि उपकारणों की मदद से कृषि लागत कम करने की जानकारी प्रदान की। • सामाजिक कृरितिया जैसे अंधविश्वास, नशा व अन्य दुर्गुणों से होने वाले दु:परिणामों को नुक्कड़ नाटिकाओं के माध्यम से जागरूक किया।
6.	श्रीमति सुरता पति कालीया	हत्यादेली	• कृषि लागत कम करने के साथ सह व्यवसाय के रूप में जैविक खाद उत्पादन एवं ईंधन के रूप में बायोगैस के प्रयोग के बारे में जानकारी प्रदान की।

रावे छात्राओं की एडवाजरी कमेटी–

डॉ. आई.एस. तोमर डॉ. महेन्द्रसिंह जादौन डॉ. जगदीश मौर्य डॉ. वी.के. सिंह डॉ.आर.के. त्रिपाठी

6/8/2021

वरिष्ठ वैज्ञानिक एवं प्रमुख
वरिष्ठ वैज्ञानिक एवं प्रमुख
कृषि विज्ञान केन्द्र
झाबुआ (म.प्र.)

Student Feedback - Under Industrial Attachment

B.Sc. Agriculture IV Year 2017-18

Section A – Student Information

Name	Ku. Itishree Rathore
Roll No.	142A28

Section B- Industrial attachment Information

Code of Training Module/Course	Agro Industrial Attachment
Name of the organization where you underwent industrial training	Manav Chetna Vikas Kendra, Pivday, Indore
Date of training commencement	23 Oct. to 13 Nov. 2017

Duration of training (please √)	04 weeks	✓

Section C - Evaluation of Industrial attachment process

1. Please rate the students on the basis of training received.
(1– Very attentive, 2 – attentive, 3 – Less attentive, 4 – Not attentive,

Area		Rating
i	Was the students interactive	1
ii	Was the student interested	1
iii	Students Participation	2
iv	Experience on management aspects	2
v	Knowledge on industry standards and procedures	1
vi	Was the training useful & helpful	1
vii	Interaction with the workers	1
viii	Time Management	1
ix	Opportunity to get the job at the same organization	1

2. Please rate the industrial training process facilitated by the Faculty with respect to the following aspects?

3. **(1 – Very Good, 2 – Good, 3 –No Idea, 4 –Bad, 5 –Very Bad)**

Administrative procedures related to finding training placement	1
Monitoring procedure adopted for students on industrial training	1
Assistance given by Faculty/Department staff	1
The way in which final assessment was conducted	1

4. Please give your overall view along with suggestions to improve.

(4)

2. Please rate the industrial training process facilitated by the Faculty with respect to the following aspects?

3. (1 – Very Good, 2 – Good, 3 – No Idea, 4 – Bad, 5 – Very Bad)

Administrative procedures related to finding training placement	Good
Monitoring procedure adopted for students on industrial training	Good
Assistance given by Faculty/Department staff	Good
The way in which final assessment was conducted	Good

4. Please give your overall view along with suggestions to improve.

....

....

....

....

Thank You very much for your Kind Corporation

(R. Ramesh) Ramesh Pandey

Head of Organization

6.4.8. STUDENT INTAKE AND ATTRITION IN THE PROGRAMME FOR THE LAST FIVE YEARS

Table: 7. Student intake and attrition in the programme for the five years

Name of the Degree Programme	Actual students admitted in last five years					Attrition (%)				
	2016-17	2017-18	2018-19	2019-20	2020-21	2016-17	2017-18	2018-19	2019-20	2020-21
B.Sc.(Hons.) Ag.	75	92	81	81	80	11 %	0 %	0 %	0 %	0 %

6.4.9. ICT APPLICATION IN CURRICULA DELIVERY

Smart-class room facilities have been developed in the college. During the last five years, most faculties have developed ICT enabled teaching material and practical manuals. Audio visual teaching aid facility and smart classrooms are available in the college.

Practical/project work centred courses have been developed. Due *weightage* is given by the Institution to the innovative teaching methods developed by faculties. As ICT has now become a part of teaching programme. It is meeting the expectation in curricula delivery in theoretical courses through power point presentation and in practical courses through digital presentation.

6.4.10. THE INFORMATION PERTAINING TO 6.4.1 TO 6.4.9 HAS BEEN PROVIDED FOR UG AND PG DEGREE PROGRAMMES, SEPARATELY.

6.4.11. CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

Signature of the Dean of the college with Date & Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1214
Dated : 08/11/2021

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

Dean
College of Agriculture
INDORE

PROGRAMME –2

M.Sc. (Agriculture)

2 Year Master Degree Programme

6.4

(1) M.Sc. (Ag.) Agronomy

6.4.1 Brief History of Degree Programme

Name of the degree programme: **M.Sc.(Ag.) Agronomy**

In order to initiate, strengthen and develop the agricultural research and education in Central India, Institute of Plant Industry (IPI) was established in the year 1924 at Indore. The glorious work was done by the Institute of Plant Industry during 1924 to 1957 in the field of agriculture, including crop management. The new Madhya Pradesh State was formed on November 1, 1956 and the Madhya Pradesh Agricultural Research Institute (MPARI) has been established to strengthen the Agricultural research in the state. The College of Agriculture Indore came in to functioning in the year 1959, under the jurisdiction of Vikram Vishwa Vidyalaya, Ujjain utilizing building and infrastructure of IPI. Agronomy department played a keyrole in teaching of subjects since inception of the college. The Madhya Pradesh Agricultural University (JNKVV) was started in the year 1964. In the year 2008 Govt. of M.P. divided JNKVV in two part and formed new Agricultural University Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya , Gwalior with 25 district of M.P. and after 2008 College of Agriculture Indore comes under newly formed university to integrate teaching, research and extension activities in agricultural field of the state at university level. The faculty of Agriculture in the university was formed in the year 1967 with Agronomy as the largest department with UG and PG teaching at each campus of the university.

The post graduate students of Agronomy contributed to research related to management of inputs for sustainable crop production. The faculty members of the discipline also handled the research work carried in the region through plan and non plan schemes of the state. Besides these, All India Coordinated Project on Cropping System Research, Experiments on Cultivators Field (ECF) , Seed Village Scheme headed by senior scientists of Agronomy. The Agronomists took important role in the research programme of AICRP for Dryland Agriculture (since 1971), All India Coordinated Sorghum Improvement Project (since 1969), AICRP for Cotton (since 1067), All India Coordinated Project on Safflower, Medicinal crops (1975-2004) and Regional Research on Pulses (since 1977). The Faculty members of Agronomy have viable association in various extension programmers' such as Indo UK Operational Research Project, IERP, and Krishi Vigyan Kendra's that are well recognized. The faculties of this discipline also played a major role in the establishment and successful running of seed production unit of the college and farms under jurisdiction of the college.

Objectives of initiating M. Sc. Programme	To ready the students to admit in their profession with depth of subject knowledge in a particular field of specialization through major, minor and supporting courses, Seminars, Theses work to fulfill the needs of industry R&D organization and government body

Accomplishment of M. Sc. Programme	During 2016-17 to 2020-21, 31 students have been completed their degree programme and 12 students are in pipeline to submit very soon 03 students passed National Eligibility Test conducted by ASRB. (Annexure: AGRO-IV) 03 students have joined as AFO in bank, one as RHEO, one as senior trainee in NSC (National Seed Corporation) one as Assistant Quality Controller and one as section officer (horticulture) in Delhi Development Authority (Annexure: AGRO-V)

Degree Programme offered by the department	Specialization	Year of start	Number of seats					Total
			16-17	17-18	18-19	19-20	20-21	Total
M. Sc. (Ag.)	Agronomy	1969	8+1*	8	12+1*	12	12	54
Student passed out			8+2#	5+1#	7+2#	6	-	31

* Transferred and Adjusted Students # Repeat Students

- Y_1= Year 2016-17, Y_2= Year 2017-18, Y_3= Year 2018-19, Y_4= Year 2019-20, Y_5= Year 2020-21

Objective of the Department

- To impart teaching of Agronomy to under graduate and post graduate students.
- To conduct the research in the field of crop production, nutrient management, conservation agriculture (CA), cropping system, dry land agriculture, weed science, land configuration, variety comparison, climate change, aberrant weather condition.
- Transfer of technology to the farmers through KVKs and agricultural departments.

6.4.2 Faculty Strength

The faculty strength of the Degree Programme need to be given cadre wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**1**	**1**	**2**
2	Associate Professor	**1**	**1**	**2**

3	Assistant Professor	**3**	**4**	**7**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	**Filled**	**Vacant**
Laboratory staff			
Lab Technician	1	0	1
Lab Attendant	1	0	1

6.4.4 Classrooms and Laboratories:

Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme.

Dimensions of Classrooms:

S.N.	**Name of Classrooms**	**Length (Metre)**	**Width (Metre)**
1.	M.Sc.(Ag.) Horticulture	7.60	14.65
2.	M.Sc. (Ag.) Plant Pathology	6.10	14.0
3.	M.Sc. (Ag.) Entomology	7.60	11.95
4	M.Sc.(Ag.) Economics	9.10	6.10
5.	M.Sc.(Ag.) Plant Pathology	7.60	11.50
6.	M.Sc.(Ag.) Extension Edu.	9.10	6.10

-

List of classroom and functional laboratories

No. of Lecture room with LCD along with seating capacity	One, seating capacity of 30 students
No. of Laboratory	One, for practical and research work
Farm Facilities	Students farm for UG and PG students

List of major equipments at present in the department

S.N.	**Equipment's**	**Locations**	**Photos**
1	Digital Leaf Area Meter	Agronomy lab	

2	Hot Air Oven	Agronomy lab	
3	pH Meter	Agronomy lab	
4	Micro Electronic Weighing Balance	Agronomy lab	
5	Soil Auger	Agronomy lab	
6	V Notch	Agronomy lab	
7	Orifices	Agronomy lab	

8	Brush Cutter	Agronomy Store	
9	Precision Electronic Balance	Agronomy lab	
10	Battery Operated Knapsack Sprayer	Agronomy Store	
11	Wheel Hand Hoe	Agronomy Store	
12	Hand Hoe	Agronomy Store	

13	Drip Irrigation Model	Agronomy lab	
14	Anemometer	Agronomy lab	
15	Weighing Machine	Agronomy lab	
16	Refractometer	Agronomy lab	
17	Tablet leaf area meter	Agronomy lab	

18	Wet Sieve Shaker	Agronomy Store	
20	Single Plant Thresher	Agronomy Store	
21	Seed and Soil Grinder	Agronomy Store	
22	Macro Electronic Weighing Balance	Agronomy Store	
23	Four Computer with Accessories	Agronomy lab	

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	13	10
2017-18	13	10
2018-19	13	10
2019-20	13	10

2020-21	13	10

Theory and practical batches

At UG level, the department offers 11 core and 1 elective course, of which 9 core and 01 elective courses have practical components. More over two courses AGR311 and 321 are totally practical oriented.(Practical Crop Production I and II)

For theory in core courses, from 1st Sem. to 6th Sem. there are three batches with an average of about 28-30 students in each batch.

- Then for theory in professional elective course during 6th Sem, there is one batch only.
- At M.Sc. level, the department of agronomy offers 13 courses in which 10 courses have practical components. There are limited seats in M.Sc. programme. Some courses are offered as minor courses for students of other departments. There is only one batch for theory classes and one batch for practical classes in all the courses.

6.4.5 Conduct of Practical and Hands-on-Training

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements. (Annexure: AGRON – IX)

Course Title	Course No./ Credit hrs.	Practical and Hands on Training Courses	How far students are getting desire practical and hands on training as per the curriculum
Soil Fertility and Nutrient Management	AGRON 502 (2+1)	• Determination of soil pH	• Demonstrated in laboratory with the help of pH meter
		• Determination of ECe,	• Explained the details about determination of EC
		• Determination of available N, P, K and S in soil and plant	• Explained the details about determination of N,P, K and S in soil and plant
Principles and practices of Weed Management	AGRON 503 (2+1)	• Identification of important weeds of different crops	• Visited to the field and identified of important weeds of different crops in the field
		• Preparation of a weed herbarium	• Explained about weed preservation and weed herbarium is prepared by the students
		• Crop-weed competition studies	• Explained about crop-weed competition
		• Use of various types of spray pumps and nozzles and calculation of • swath width	• Explained about the different types of sprayer and nozzles, their parts and uses

		• Bioassay of herbicide resistance	• Explained about bioassay of herbicide resistance
		• Calculation of herbicidal requirement	• Solve numerical and calculated the commercial dose of herbicide required for application
Principles and practices of Water Management	AGRON 504 (2+1)	• Measurement of soil water potential by using tensiometer, and pressure plate and membrane apparatus	• Explained about measurement of soil water potential by using tensiometer, and pressure plate and membrane apparatus
		• Water flow measurements • using different devices	• Explained about Water flow measurements • using different devices
		• Determination of irrigation requirements	• Solved numerical how to Determine of irrigation requirements
		• Calculation of irrigation efficiency	• Solved numerical how to Calculate irrigation efficiency
Dryland Farming and Watershed management	AGRON 512 (2+1)	• To estimation of moisture index and aridity index	• Explained the how to calculate moisture index and aridity index and how it is useful for studies.
		• To collection and interpretation of data for water balance equations	• Explained the collection and interpretation of data for water balance equation in practical file.
		• To Visit to dryland research stations and watershed projects	• AICRP for Dryland Agriculture, Indore centre visited and explained about experiments and as well as dryland technologies
		• To study of field experiments relevant to dryland farming	• Explained about field trials conducted at AICRP centre.
Principles and practices of organic farming	AGRON 513 (2+1)	• To know aerobic and anaerobic methods of making compost	• Demonstrated the aerobic and anaerobic compost methods at Research Farm
		• To making of vermicompost	• Demonstrated the vermicomposting unit and explained how it is prepared.
		• To identification and nursery raising of important agro-forestry tress and tress for shelter belts	• Visited the nursery and explained the about agro-forestry trees
		• To Visit to an organic farm	• Demonstrated the organic farm at farmers field as well as Research Farm of CoA, Indore
		• To efficient use of biofertilizers, technique of treating legume	• Demonstrated about seed treatment of legume seeds at

			field and explained how it is useful to crop and soil
Mater's Seminar	AGRON 591 (0+1)	• Preparation and presentation of particular research topic based on research findings	• Particular research topic are allotted to all the students to present their topic in the form of power point presentation including research findings in support of research topic

6.4.6 Supervision of students in PG Programme

Number of students being supervised by the Faculty in case of Masters Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Details of M.Sc. programme offered by the Department

Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	8+1*	10	1:09
2017-18	8	10	1:08
2018-19	12+1*	8	1:1.625
2019-20	12	6	1:2
2020-21	12	5	1:2.40

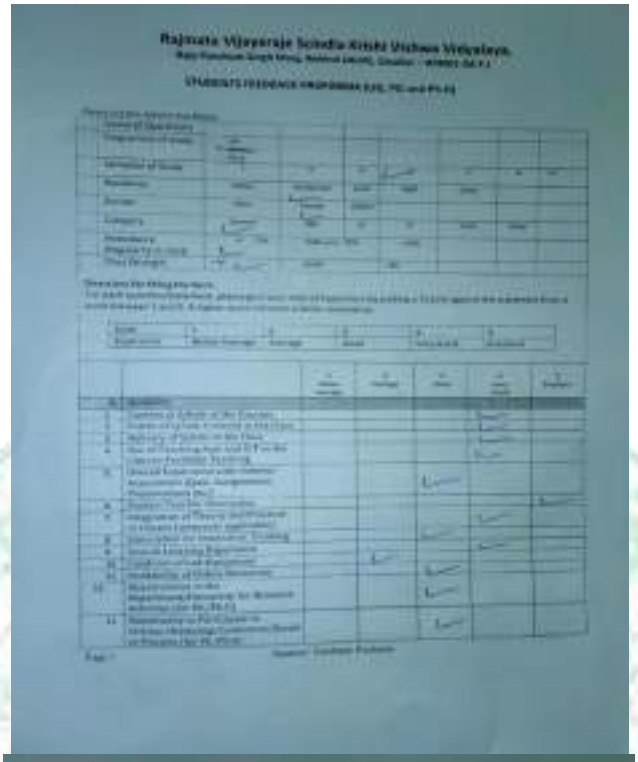
***Transferred and Adjusted students**

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.)

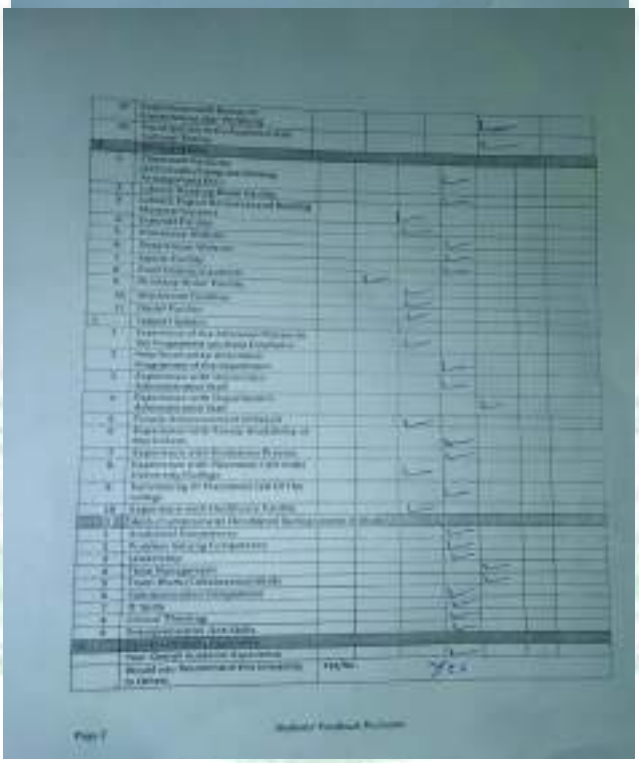
Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back.

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff. Some of the issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time, students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations. Students were advised to go to library and search of the research papers and literature related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and

clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.



Rajmata Vijayaraje Scindia Kshatriya Vishwa Vidyalaya



6.4.8 Student intake and attrition in the programme for last five years

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	17-18	18-19	19-20	20-21	2016-17	17-18	18-19	19-20	20-21
M.Sc (Ag) Agronomy	8+1*	8	12+1#	12	12	22.22	12.50	23.07	0.00	0.00

*Transferred and Adjusted Students

6.4.9 ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Use of ICT application in teaching and practical for curricula delivery

Yes, the faculty members of Department of agronomy use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer printer and internet connection in their offices. There is Wi-Fi facility for faculty, staff and students. This infrastructure provides opportunities for the use of ICT in quality teaching, research and extension. Faculty

members use power point presentations in teaching all courses at UG and PG level. For PG students emails are also used.

Corses/Theory Courses	Type of ICT application	
	ICT tool	Purpose
AGRON 501, AGRON 502, AGRON 503,AGRON 504, AGRON 511, AGRON 512, AGRON 513,	What's app groups	• Circulars & notices, class & practical schedule, Exam schedule
		• Audio lectures, ppt, word file and pdf file
	e-Library	• On line books accessibility
		• e-resources, Journals & references, thesis
	Statistical tools	• Data analysis & compilation of results
	On line portal	• Uploading of marks

6.4.10 The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG and PG Degree Programmes, separately, and to be presented College-wise.

6.4.11 Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weight age for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12 Certificate (Applicable when SAR is submitted for Programme)

I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

Signature of Dean of the College with Date and Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1915
Dated : 08/11/2024

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

Dean
College of Agriculture
INDORE

6.4

(2) M.Sc. (Ag.) Plant Pahology:

In order to initiate, strengthen and develop the agricultural research and education in Central India, Institute of Plant Industry (IPI) was established in the year 1924 at Indore. The glorious work was done by the Institute of Plant Industry during 1924 to 1957 in the field of agriculture, including crop management. The new Madhya Pradesh State was formed on November 1, 1956 and the Madhya Pradesh Agricultural Research Institute (MPARI) has been established to strengthen the Agricultural research in the state. The College of Agriculture Indore came in to functioning in the year 1959, under the jurisdiction of Vikram Vishwa Vidyalaya, Ujjain utilizing building and infrastructure of IPI . Plant Pathology department played a key role in teaching of subjects since inception of the college. The Madhya Pradesh Agricultural University (JNKVV) was started in the year 1964. In the year 2008 Govt. of M.P. divided JNKVV in two part and formed new Agricultural University Rajmata Vijyaraje Scindia Krishi Vishwa Vidyalaya , Gwalior with 25 district of M.P. and after 2008 College of Agriculture Indore comes under newly formed university to integrate teaching, research and extension activities in agricultural field of the state at university level. The faculty of Agriculture in the university was formed in the year 1987 with Plant Pathology as the largest department with UG and PG teaching at each campus of the university.

The post graduate students of Plant Pathology contributed to research related to management of plant diseases for sustainable crop production. The Plant pathology section has the facilities of general plant pathology, molecular plant pathology, mushroom laboratory, polyhouse and glass house, wilt sick plot for chickpea and micro plot for dry root rot disease The faculty members of the discipline also handled the research work carried in the region through plan and non plan schemes of the state. Besides these, All India Coordinated Project on chickpea and Mushroom cultivation and value addition. The faculties of this discipline also played a major role in the establishment and successful running of seed production unit of the college and farms under jurisdiction of the college.

Objective of the Department

- Integrated approach in controlling post harvest diseases and improving shelf life of produce and management of losses caused by the biotic indices.
- To introduce the principles of plant pathology and about the different types of plant pathogens
- To introduce the ecology, biology, etiology, life cycle and management of disease of field and horticultural crops
- To acquaint the biology, epidemiology, ecological relationship, biodiversity of soil, seed and air inhabitant bacteria, viruses, fungi, nematode, mollicutes, and others important causes of plants.
- Mushroom Production Technology: Complete package for entrepreneurial skills

6.4.1 Brief History of Degree Programme

- Department has been initiated in 1987 to till date. From 2016-17 to 2020-21 total 20 students completed their degree programme. Admitted students conducted

their research in the field of biology, ecology, epidemiology, biodiversity, aerobiology, pathometry, molecular characterization, host pathogen interaction, biological management, host resistance, integrated management, seed health technology, and mushroom production technology.

Objectives of initiating M. Sc. Programme	• Produce well qualified and competent graduates having strong theoretical knowledge and practical skill in plant pathology for undertaking training, research and extension service. • Generate base line data and technologies and knowledge in different fields of plant pathology that would help for plant disease management of the community and the country through problem oriented and demand driven graduate thesis research work.
Accomplishment of M. Sc. Programme	During 2016-17 to 2020-21. Total 20 students have been completed their degree programme and 10 students are in pipeline to submit very soon. • 01 Student qualified CSIR-NET (Annexure IV) • Student's placements (Annexure V)

Degree Programme offered by the department	Specialization	Year of start	Number of seats					
			Y1	Y2	Y3	Y4	Y5	Total
M. Sc (Ag)	Plant Pathology	1987	08	08	12	12	12	52
Student passed out			6	06	08	--	--	20

*Transferred students from Gwalior to Indore were also passed

6.4.2 Faculty Strength:

The faculty strength of the Degree Programme needs to be given cadre- wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**0**	**0**	**0**
2	Associate Professor	**0**	**1**	**1**
3	Assistant Professor	**1**	**3**	**4**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	Filled	Vacant
Laboratory staff			
Lab Technician	1	1	0
Lab Attendant	1	0	1

6.4.4 Classrooms and Laboratories: Mention the number of class rooms and functional laboratories available for the degree programme and justify if it sufficient to meet the course curricula requirement. List major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the degree programme may be given. Mention theory and practical batches for the degree programme.

List of classroom and functional laboratories

PG class room with multimedia and lab	950 sq.ft
UG class room with multimedia and lab	1040 sq.ft
Mushroom unit	1950 sq.ft
Molecular Plant Pathology Lab	320 sq.ft
Seminar Hall	500 sq.m

List of major equipments at present in the department

S. No.	Name of Instrument/Equipment	Location/ Lab No.	Photo
1	BOD Incubator (04)	UG, PG Lab and mushroom lab	
2	Laminar Air Flow /biosafety cabinet (03)	UG , PG Lab and mushroom lab	

3	Autoclave (Vertical and horizontal) (04)	UG , PG Lab and mushroom lab	
4	Hot Air Oven (03)	UG , PG Lab and mushroom lab	 
5	Refrigerators 4 °C (03), -20°C (03) and -80°C (02)	UG , PG Lab and mushroom lab	
6	Trinocular microscope with image analyser (01) and light microscope (50)	UG, PG Lab	

7	Thermal cycler PCR (3 no)	Molecular Laboratory	
8	RT-PCR	Molecular Laboratory	
9	Gel-Doc unit (2 no)	Molecular Laboratory	
10	ELISA reader	Molecular Laboratory	
11	Ultra water purification machine	Molecular Laboratory	
12	Water bath, Hot plate	Molecular Laboratory	

13	Centrifuge ultra and micro	Molecular Laboratory	
14	Gel electrophoresis (04)	Molecular Laboratory	
15	Ice flaker	Molecular Laboratory	
16	Spectrophotometer	Molecular Laboratory	
17	Bag sealing machine	Mushroom Unit	

18	Humidifier (3 no)	Mushroom Unit	
19	Baby Boiler	Mushroom Unit	
20	Electric Balance (6 no)	UG, PG lab and Mushroom Unit	

2019-20

S.N.	Name	Date	Time	Sign
1	Sumayla	2/12/20	12:05	[illegible]
2	Priyanshi Nag	3/12/20	10:30	[illegible]
3	Priyanshi Nag	5/12/20	10:00	[illegible]
4	Rajat Jain	23/12/20	12:00	Rajat
5	Sumayla Khan	24/12/20	11:50	[illegible]
6	Priyanshi Nag	4/1/21	12:45	[illegible]
7	Rajat Jain	4/1/21	1:03	Rajat
8	Rajat Jain	5/1/21	11:30	Rajat
9	Sumayla Khan	5/1/21	11:05	Sumay
10	Priyanshi Nag	5/1/21	10:07	[illegible]
11	Priyanshi Nag	6/1/21	10:10	[illegible]
12	Jaynarayan Patel	6/1/21	11:50	Jay
13	Sumayla Khan	6/1/21	11:55	[illegible]
14	Rajat Jain	2/1/21	11:58	Rajat
15	Rajat Jain	12/1/21	12:40	Rajat
16	Priyanshi Nag	7/1/21	11:15	[illegible]
17	Sumayla Khan	7/1/21	12:15	Sumay
18	Jaynarayan Patel	7/1/21	11:03	Jay
19	Priyanshi Nag	8/1/21	11:18	[illegible]
20	Rajat Jain	8/1/21	12:10	Rajat
21	Sumayla Khan	8/1/21	11:05	Sumay
22	Priyanshi Nag	9/1/21	11:45	[illegible]
23	Sumayla Khan	11/1/21	11:55	Sumay
24	Rajat Jain	11/1/21	1:10	Rajat
25	Priyanshi Nag	12/1/21	11:38	[illegible]
26	Jaynarayan Patel	12/1/21	3:55	Jay

S.N.	Name	Date	Time	Sign
27	Priyanshi Nag	12/1/21	1:20	[illegible]
28	Jaynarayan Patel	13/1/21	1:10	Jay
29	Sumayla Khan	13/1/21	12:14	Sumay
30	Priyanshi Nag	14/1/21	11:05	[illegible]
31	Rajat Jain	14/1/21	2:10	Rajat
32	Priyanshi Nag	15/1/21	10:10	[illegible]
33	Sumayla Khan	15/1/21	11:38	Sumay
34	Priyanshi Nag	18/1/21	10:32	[illegible]
35	Jaynarayan Patel	18/1/21	2:08	Jay
36	Rajat Jain	18/1/21	2:45	Rajat
37	Priyanshi Nag	18/1/21	1:20	[illegible]
38	Sumayla	19/1/21	2:00	Sumay
39	Priyanshi Nag	20/1/21	2:00	[illegible]
40	Jaynarayan Patel	20/1/21	12:10	Jay
41	Rajat Jain	21/1/21	12:20	Rajat
42	Priyanshi Nag	21/1/21	10:30	[illegible]
43	Jaynarayan Patel	21/1/21	1:05	Jay
44	Jaynarayan Patel	3/2/21	12:30	Jay
45	Priyanshi Nag	3/2/21	11:15	[illegible]
46	Rajat Jain	3/2/21	1:20	Rajat
47	Sumayla Khan	3/2/21	2:30	Sumay
48	Jaynarayan Patel	4/2/21	2:32	Jay
49	Jay Narayan Patel	8/2/21	1:58	Jay
50	Jay Narayan Patel	18/2/21	3:58	Jay
51	Sumayla Khan	18/2/21	10:10	Sumay
52	Priyanshi Nag	18/2/21	11:30	[illegible]
53	Jaynarayan Patel	1/3/21	2:55	Jay

19-20

SN	Name	Date	Time	Sign
1	Sumayla Khan	2/11/20	1:30	Sumay
2	Priyanshi Nag	5/12/20	11:50	[illegible]
3	Rajat Jain	22/12/20	1:50	Rajat
4	Sumayla Khan	24/12/20	11:30	Sumay
5	Priyanshi Nag	4/1/21	10:05	[illegible]
6	Rajat Jain	5/1/21	11:30	Rajat
7	Sumayla Khan	6/1/21	1:50	Sumay
8	Rajat Jain	7/1/21	12:40	Rajat
9	Jaynarayan Patel	8/1/21	1:05	Jay
10	Priyanshi Nag	11/1/21	11:5	[illegible]
11	Sumayla Khan	12/1/21	3:05	Sumay
12	Priyanshi Nag	12/1/21	10:45	
13	Jaynarayan Patel	13/1/21	12:24	
14	Rajat Jain	14/1/21	11:08	
15	Priyanshi Nag	14/1/21	11:50	
16	Sumayla Khan	15/1/21	11:05	
17	Priyanshi Nag	15/1/21	12:35	
18	Jaynarayan Patel	18/1/21	10:25	
19	Rajat Jain	18/1/21	1:29	
20	Priyanshi Nag	19/1/21	1:50	
21	Sumayla Khan	19/1/21	2:00	
22	Priyanshi Nag	20/1/21	2:30	
23	Jaynarayan Patel	28/1/21	10:30	
24	Priyanshi Nag	30/1/21	10:30	
25	Jaynarayan	22/1/21	2:05	
26	Rajat Jain	3/3/21	2:03	

SN	Name	Date	Time	Sig.
27	Sumayla Khan	3/3/21	2:30	
	[illegible]	[illegible]	—	—
28	Jaynarayan Patel	4/3/21	2:22	
29	Sumayla Khan	19/3/21	10:10	
30	Priyanshi Nag	19/3/21	1:30	
31	Jay Narayan	19/3/21	2:00	
32	Sonilal Bhagat	24/7/21	3:00	[illegible]
33	Sonilal Bhagat	25/7/21	2:40	[illegible]
34	Ravindra Bala	20/7/21	2:30	[illegible]
35	Sanjay Verma	31/07/21	11:25	[illegible]
36	Sanjay Verma	05/08/21	2:25	[illegible]
37	Ravindra Bala	05/08/21	2:00	[illegible]
38	Sanjay Verma	04/08/21	2:20	[illegible]
39	Ravindra Bala	04/08/21	2:00	[illegible]
40	Sanjay Verma	06/08/21	1:30	[illegible]
41				

Instruments Log Book

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	12	11
2017-18	12	11
2018-19	12	11
2019-20	12	11
2020-21	12	11

Theory and practical batches

At UG level, the department offers 03 courses, 1 RAWE and 01 ELP on "mushroom cultivation and value addition" (Elective basis) in which ELP is completely practical and entrepreneurship skill development oriented courses.

For theory in core courses, from IInd Sem. to 4th Sem. there are three batches for practical's with an average of about 28-30 students in each batch.

• At M.Sc. level, the department of Plant Pathology offers 12 theory and 11 practical courses. There are 12 seats available in M.Sc. programme. Some courses are offered as minor courses for students of other departments (Genetics and plant breeding and Entomology). As allied subject statistics, Library, Research ethics, communication skills , IPR, Laboratory techniques and Disaster management. There is only one batch for theory classes and one batch for practical classes in all the courses.

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

PG courses:

Course title	Course No./Credits Hrs.	Practical courses and hands on training	How far students are getting desired practical and hands on training as per the curriculum	
Mycology	PP 501 (2+1)	Comparative study of different groups of fungi	• Cultural and morphological identification of different genera of fungi *viz.,Alternaria, Erysiphe, Puccinia, Ustilago, Colletotrichum, Trichoderma, Penicillium, Aspergillus, Fusarium, Albugo, Cercospora* and *Sclerotium*	 

		Isolation of fungi	• Using Potato dextrose medium for isolation fungi • Serial dilution technique	
		Preservation of fungi	• Permanent slide preparation	
Plant Virology	PP 502 (2+1)	Study of symptoms caused by viruses	• Diagnosis of mosaic, leaf curl, ring spot, witches broom, stunting, stripe, chlorosis, yellowing, vein clearing and leaf reddening	

Plant Bacteriology	PP 503 (2+1)	Isolation and purification	• Isolation of plant pathogenic bacteria by using Nutrient Agar medium • Purification of bacteria by streaking plate method	
		Identification and host inoculation of phytopathogenic bacteria	• Identification of plant pathogenic bacteria based on symptomatology *viz*, canker, blight, scab, wilt and soft rot	
		Staining methods	• Students are carried out experiment on Gram staining for differentiation of Gram positive	

			and Gram-negative bacteria	
Detection and diagnosis of plant diseases	PP 505 (2+1)	Methods to prove Koch's postulates	• Pathogenicity test conducted on cabbage to prove the Koch postulates	
		Pure culture techniques	• Hyphal tip and single spore isolation	
		Use of selective media to isolate pathogens	• Preparation Kings B and TSM media for *Pseudomonas* and *Trichoderma*	
		Microscopic techniques and staining methods	• Use of simple and compound microscope	
		Evaluation of fungicides	• Poison food	

			technique for evaluation of fungicide	
		Field experiments layout	• RBD design layout in field	
Integrated Disease Management	PP 516 (2+1)	Application of biological, cultural, chemical and biocontrol agents	• Isolation of bio control agents from rhizosphere soil. • Serial dilution technique • Seed treatment with bio control agents for management of soil borne pathogens. • Foliar spray of fungicides	
Seed Health	PP 510	To acquaint with seed-borne	• Paper towel method	

Technology		diseases, their nature, detection, transmission, epidemiology, impacts/loses and management	, blotter and agar method for detection of seed borne pathogens	
Nematode Management	Nema 510	*In vitro* screening of synthetic chemicals and plant products	• Efficacy of botanicals against nematodes.	
Master seminar	PP 591	Students delivered master seminar on assigned topics		 

Synopsis seminar		Students delivered synopsis seminar		
Thesis viva-voce		Students final thesis viva voce conducted by advisory committee		 
Visitors		Board of member of RVSKVV Dr. Ashutosh Aniruddha Murkute visited lab and interacted with our students.		

		Honorable vice chancellor RVSKVV visited to chickpea plot		
		Dr. A.K. Singh, DI, RVSKVV, Gwalior visited to our pot experiment and interacted with PG students		
		BARC team visited chickpea experimental plot. Observation of Nanomolecules against soil borne pathogens.		 
		School children visited to our lab. Brief introduction of department and instruments.		

		Japanese team visited our mushroom lab		 

6.4.6 Supervision of students in PG programme:

Number of students being supervised by Faculty in case of Masters Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Details of M.Sc. programme offered by the Department

Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	7	03	1:2.33
2017-18	8	02	1:4
2018-19	11	01	1:11
2019-20	7	01	1:7
2020-21	11	01	1:11

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff. Some of the issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time,

students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations. Students were advised to go to library and search of the research papers and literature related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.

6.4.8 Student intake and attrition in the programme for last five years: Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	**Actual student admitted in last five years**					**Attrition (%)**				
	2016-17	17-18	18-19	19-20	20-21	2016-17	17-18	18-19	19-20	20-21
M.Sc (Ag)	**8**	**8**	**12+2***	**12**	**11**	**12.5**	**12.5**	**25**	**8.33**	**27.27**

***Transferred and adjusted**

6.4.9 ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Use of ICT application in teaching and practical for curricula delivery.

S. No.	Title of the course	Course No	Type of ICT application
1	Mycology	PL PATH-501	Power point presentation, online class through Google meet,WhatsApp and zoom application
2	Plant Virology	PL PATH-502	Power point presentation, online class through Google meet, WhatsApp and zoom application
3	Principles of Plant Pathology	PL PATH-504	Power point presentation, online class through Google meet, WhatsApp and zoom application
4	Detection and diagnosis of plant diseases	PL PATH-505	Power point presentation, online class through Google meet, WhatsApp and zoom application
5	Disease resistance in plants	PL PATH-513	Power point presentation, online class through Google meet, WhatsApp and zoom application
6	Plant Bacteriology	PL PATH-503	Power point presentation, online class through Google meet, WhatsApp and zoom application
7	Seed health technology	PL PATH-510	Power point presentation, online class through Google meet, WhatsApp and zoom application
8	Integrated disease management	PL PATH-516	Power point presentation, online class through Google meet , WhatsApp and zoom application
9	Nematode management	NEMA 510	Power point presentation, online class through Google meet, WhatsApp and zoom application

Yes, the faculty members of Department of Plant Pathology use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer printer and internet connection in their offices. There is Wi-Fi facility for faculty and staff only students avail these facility from ARIS cell. This infrastructure provides opportunities for the use of ICT in quality teaching, research and extension. Faculty members use power point presentations in teaching all courses at UG and PG level. For PG students emails are also used.

6.4.10 The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11 Since the accreditation of Programmes is related to the All-India Admission from ICAR and also having weight age for college accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12 Certificate (Applicable when SAR is submitted for Programme): I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

Signature of the Dean of the college with Date & Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1716
Dated : 08/11/2024

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

Dean
College of Agriculture
INDORE

6.4

(3) M.Sc. (Ag.) Soil Science

Soil Science is one of major disciplines of agriculture. This department was established since the inception of Agriculture College, Indore in 1959 with UG and PG courses. The College of Agriculture Indore came in to functioning in the year 1959, under the jurisdiction of Vikram Vishwa Vidyalaya, Ujjain utilizing building and infrastructure of Institute of Plant Industry (IPI). Before inception of this college an Institute of Plant Industry (IPI) was established in the year 1924 at Indore. The department of soil science and agricultural chemistry played a major role in strengthening the agriculture. An oldest agricultural university of central India was established in Madhya Pradesh in the name of Jawaharlal Nehru Krishi Vishwa Vidyalaya (JNKVV) at Jabalpur during 1964. In 2008 this university was separated and another university was formed with the name of Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya (RVSKVV), Gwalior along with 25 districts of Madhya Pradesh. So, the College of Agriculture, Indore and Department of Soil Science and Agricultural Chemistry come under the jurisdiction of RVSKVV, Gwalior.

The post graduate students contribute the research related to soil science fields. The research work carried out by the students in the fields of soil science viz. soil fertility, soil survey, soil reclamation, soil microbiology, soil physics and soil chemistry etc. An AICRP on Management of Salt Affected Soils and Use of Saline Water in Agriculture also contributed more to the department with related research work by the students since its inception 1969. AICRP for Dryland Agriculture and Soil Testing Service Scheme also played an important role in strengthening the department a lot by providing facilities to the PG students. Old PG students did a lot of research work particularly in the fields of soil classification and reclamation aspects. The department of soil science also has good laboratory facilities for PG research students of the college. The faculties of the soil science discipline also played a major role in the establishment and successful running of the department.

Objective of the Department

- To conduct research in different aspects of soil science including classification and physico-chemical properties of salt affected soils, effect of different nutrients on crops, effect of long term fertilizers on crop performance, characterization and classification of ground water quality, study on use of different organic resources and integrated nutrient management for sustainable crop production.
- **Transfer of technology to the farmers through KVKs and agricultural departments.**

6.4.1 Brief History of Degree Programme

Name of the degree programme: **M.Sc.(Ag.) Soil Science**

- Department has been initiated in 1963 to till date. From 1964 to 2020-21 total 179 students completed their degree programme. Admitted students conducted their research in the field of salt affected soils, long term fertilizer experiment, crop production, nutrient management, conservation agriculture (CA), cropping system and dry land agriculture.

Objectives of initiating M. Sc. Programme	To prepare the students to admit in their profession with depth of subject knowledge in

	a particular field of specialization through major, minor and supporting courses, Seminars, Theses work to fulfill the needs of industry R&D organization and government body To fulfill the students needs and getting better opportunities in the field of education research and farming community.
Accomplishment of M. Sc. Programme	During 2016-17 to 2020-21 24 students have been completed their degree programme. At present 12 PG students are enrolled 01 student have joined as Agriculture field officer).

M. Sc. (Ag) Soil science and Agriculture Chemistry, started 1963

Year	Number of seats	Number of students passed out
2016-17	8	6
2017-18	8	6
2018-19	12	5
2019-20	12 + 1*	7
2020-21	12	-
TOTAL	53	24

*Transferred from College of Agriculture, Sehore

6.4.2 Faculty Strength:

The faculty strength of the Degree Programme need to be given cadrewise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report.

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**1**	**0**	**1**
2	Associate Professor	**0**	**0**	**0**
3	Assistant Professor	**3**	**3**	**6**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	Filled	Vacant
Laboratory staff			
Lab Technician	1	0	1
Lab Attendant	1	0	1

6.4.4 Classrooms and Laboratories:

Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme

List of classroom and functional laboratories

Number of lecture room with seating capacity	**1 (with 40 seating capacity)**
Number of lectures with LCD facilities	**1**
Number of labs with specialized purpose	**1**
Farm facility	**1 hectare**

List of major equipments at present in the department

S.N.	Equipment's	Locations	Photos
1.	**Shaker**	UG & PG lab	
2	pH meter	UG & PG lab	

3	Hot air oven	UG & PG lab	
4	GPS	UG & PG lab	
5	BOD incubator	UG & PG lab	
6	N analyser plant	UG & PG lab	
7	EC meter	UG & PG lab	

8	Deep fridge	UG & PG lab	
9	Distillation unit	UG & PG lab	
10	Augers	UG & PG lab	
11	Centrifuge Machine	UG & PG lab	
12	Yodder Apparatus	UG & PG lab	

14	Flame photometer	UG & PG lab	
15	UV-Visible spectrophometer	UG & PG lab	
16	Digital electronic balance	UG & PG lab	
17	Distillation apparatus	UG & PG lab	
18	Computer	UG & PG lab	

19	Printer	UG & PG lab	
20	Autoclave	UG & PG lab	
21	Hot Plate	UG & PG lab	

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	11	11
2017-18	11	11
2018-19	11	11
2019-20	11	11
2020-21	11	11

Theory and practical batches for PG programme

At UG level, the department offers 6 courses and 01 course have RAWE (Soil Improvement Interventions). For theory in core courses, from 1st Sem. to 6th Sem. there are three batches with an average of about 28-30 students in each batch.The department offers 11 courses at master's level for both theory and practical and there is one batch for each course.

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

Degree Programme	Hands-on training courses	How far students are getting desired practical and hands-on trainingas per the curriculum
M. Sc (Ag) Soil Science and Agricultural Chemistry **T= 11** **P=7**	**SOILS 503** **SOILS 504** **SOILS 506** **SOILS 510** **SOILS 501** **SOILS 502** **SOILS 509**	• Students get information about the physical properties and horizons in soil profile • Students know about the identification of bacteria • Students know about the availability of nutrients in soil samples of the area • Learnt about different equipments with their principles, functions and specifications • Identification of various types of soils through Munsell colour chart • Discussed on soil sampling procedure and criteria • Soil Classification with GIS sampling • Knowledge of different fertilizer application through soil test based fertilizer recommendation, soil testing • Leant about biofertilizer technology through production technology • Hands on training in vermicomposting • Learnt to Identify of different microorganisms • Students received knowledge soil and plant chemical analysis • Determination of soil microbial population, soil microbial biomass and enzyme activities.

6.4.6 Supervision of students in PG programme:

Number of students being supervised by Faculty in case of Masters Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Details of M.Sc.(Ag) programme offered by the Department

Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	08	04	1:2

2017-18	08	04	1:2
2018-19	12	03	1:4
2019-20	13	03	1:3.25
2020-21	12	04	1: 3

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff. Some of the issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time, students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations. Students were advised to go to library and search of the research papers and literature related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.

6.4.8 Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Degree Programme in M.Sc (Ag) Soil Science and Agricultural Chemistry

Year	Actual student admitted in last five years	Attrition %
2016-17	8	25
2017-18	8	25
2018-19	12	58
2019-20	13	46
2020-21	12	-

6.4.9 ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Use of ICT application in teaching and practical for curricula delivery.

Yes, the faculty members of Department of soil science use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer-printer and internet connection in their offices. There is Wi-Fi facility for faculty, staff and students. This infrastructure provides opportunities for the use of ICT in quality teaching, research and extension. Faculty members use power point presentations. All power point presentation are shared among the students.

6.4.10 The information pertaining to 6.4.1 to 6.4.10 shall be provided for each one of UG and PG Degree Programmes, separately, and to be presented College-wise.

6.4.11 Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weight age for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12 Certificate (Applicable when SAR is submitted for Programme)

I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

Signature of the Dean of the college with Date & Seal

6.4

(4) M.Sc. (Ag.) Genetics & Plant Breeding:

The establishment of institute of plant industry in the year 1924 at Indore, the crop improvement programme was carried out under the Department of Botany. The programme was continued till 1970-71 even in the regime of J.N. Krishi Vishwa Vidyalaya, Jabalpur. The status of separate department of Plant Breeding and Genetics came into existence in JNKVV and the work on crop improvement programme was continued with the financial assistance and support *via.,* ICAR, through coordinated research programme in the campus. The establishment of the new university the RVS Krishi Vishwa Vidyalaya, Gwalior in the year 2008, the College of Agriculture, Indore has become its one of its campus

6.4.1 Brief History of Degree Programme: Clearly mention in which year the degree program was initiated along with its objective and accomplishments.

Name of the degree programme: **M.Sc.(Ag.) Genetics & Plant Breeding**

- Department has been initiated in 1970 to till date. From 2016-17 to 2020-21 total 23 students completed their degree programme. Admitted students conducted their research in the field of genetic variability, diversity, heritability and genetic advance, association analysis, path coefficient analysis and tissue culture.

Objectives of initiating M. Sc. Programme	• .Generate base line data and technologies and knowledge in different fields of genetics and plant breeding that would help for crop improvement of the community and the country through problem oriented and demand driven graduate thesis research work.
Accomplishment of M. Sc. Programme	During 2016-17 to 2020-21. Total 23 students have been completed their degree programme and 13 students are in pipeline to submit very soon.

Degree Programme offered by the department	Specialization	Year of start	Number of seats					
			Y1	Y2	Y3	Y4	Y5	Total
M. Sc (Ag)	Genetics and Plant Breeding	1970	08	08	12	13	12	53
Student passed			6	06	11	-	-	23

Objective of the Department

- Teaching of Under-Graduate and Post Graduate courses and conducting research under PG teaching programme.
- Studies on the developmental aspects of Medicinal plants including Plant Tissue Culture and Biotechnology.

6.4.2 Faculty Strength:

The faculty strength of the Degree Programme need to be given cadrewise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**0**	**0**	**0**
2	Associate Professor	**0**	**2**	**2**
3	Assistant Professor	**1**	**1**	**2**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	Filled	Vacant
Laboratory staff			
Lab Technician	1	0	1
Lab Attendant	1	0	1

6.4.4 Classrooms and Laboratories: Mention the number of class rooms and functional laboratories available for the degree programme and justify if it sufficient to meet the course curricula requirement. List major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the degree programme may be given. Mention theory and practical batches for the degree programme.

List of classroom and functional laboratories

Number of lecture room with seating capacity	One, seating capacity 30 students
Number of lecture room with LCD	-
Number of labs wit specialized purpose	One, tissue culture lab
Farm facilities	Research experimental plot on Safflower, sorghum and kharif and rabi pulses. 2 ha

List of major equipments at present in the department

S. No.	Name of Instrument/Equipment	Location/ Lab No.	Photo
1	Trinocular microscope with image analyser	UG & PG Lab	
2	Laminar Air Flow	UG & PG Lab	
3	Thermal cycler PCR (3 no)	Molecular Laboratory	

4	RT-PCR	Molecular Laboratory	
5	Gel-Doc unit (2 no)	Molecular Laboratory	
6	ELISA reader	Molecular Laboratory	
7	Ultra water purification machine	Molecular Laboratory	

8	Refrigerators 4 °C, -20°C and -80°C	Molecular Laboratory	

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	10	08
2017-18	10	08
2018-19	10	08
2019-20	10	08
2020-21	10	08

Theory and practical batches

At UG level, the department offers 06 courses . For theory in core courses, from Ist Sem. to 6th Sem. there are three batches with an average of about 28-30 students in each batch.

At M.Sc. Level, the department of Genetics and Plant Breeding offers 10 theory and 08 practical courses. There are limited seats in M.Sc. programme. Some courses are offered as minor courses for students of other departments. There is only one batch for theory classes and one batch for practical classes in all the courses.

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

Course title	Course No. / Credit Hrs.	Practical and Hands on Training	How the students are getting desire Practical and hands on training as per curriculum

Under Graduate Teaching Program			
Fundamentals of Genetics	GPB 121/ 3(2+1)	• Experiments of Monohybrid / Dihybrid/Trihybrid, test cross and back cross. • Preparation of stains and fixatives for cytological studies.	• Students will understand about the gene action and inheritance of oligogeneic and polygeneic traits. • Learn about the preparation of simple and permanent slides. • Study on models of DNA and RNA .
Fundamentals of Plant Breeding	GPB 212/ 3(2+1)	• Emasculation and hybridization techniques in Self / Cross pollinated crops. • Utilization of Male sterility and Self incompatibility in production of Hybrid seed.	• Can work on the preparation of hybrids in vegetables crops commercially. • Basic knowledge regarding mode of pollination, extent of natural out crossing in a given crops. • Identification of Male sterility and Self incompatibility under field conditions.
Principles of Seed technology	GPB 221/ 3(1+2)	• Seed production programme in field and/or horticultural crops and seed standards for production of high quality of seeds *via.,* maintaining genetical and physical purity.	• Establish the high quality seed production unit. • Establish seed testing laboratory. • Training centre can be establish to train youth for seed production and seed processing techniques to make farmers self-sufficient . •
Commercial Plant Breeding	GPB 222/ 3(1+2)	• Selfing and Crossing techniques. • Techniques for production of hybrids seed *via.,* using A/B/R a three line and A/B two line system. • Quality seed production of self/ cross/often pollinated crops. • Quality seed production of vegetable crops under open and protected environment.	• Establish a seed producing unit. • Establish a seed processing, grading and packaging unit. • Establish seed testing laboratory pertaining to both genetic and physical purities. • Seed storage structure for safe and protected against the store grain pests, rat and other factors etc.
Crop Improvement –I (*Kharif* crops)	GPB 311 / 2(1+1)	• Emasculation and Hybridization techniques in various groups of crops *viz.,* Cereals, Pulses, Oil seed, Cotton. • Field techniques for seed production and Hybrid seeds	Training centre for rural youth for Hybrid seed and other classes of seed production and get them self sufficient for seeds of *Kharif* crops.

		production in *Kharif* crops	
Crop Improvement – II (*Rabi* crops)	GPB 312 / 2(1+1)	• Emasculation and Hybridization techniques in various groups of crops *viz.,* Cereals, Pulses, Oil seed crops. • Field techniques for seed production and Hybrid seeds production in *Rabi* crops	Training centre for rural youth for Hybrid seed and other classes of seed production and get them self sufficient for seeds of *Rabi* crops.

6.4.6 Supervision of students in PG programme:

Number of students being supervised by Faculty in case of Masters Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Details of M.Sc. programme offered by the Department

Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	08	06	1:1.33
2017-18	08	06	1:1.33
2018-19	12	04	1:3
2019-20	13	04	1:3
2020-21	12	04	1:3

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff. Some of the issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time, students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations.

Students were advised to go to library and search of the research papers and literature related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.

6.4.8 Student intake and attrition in the programme for last five years: Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	**Actual student admitted in last five years**					**Attrition (%)**				
	16-17	17-18	18-19	19-20	20-21	2016-17	17-18	18-19	19-20	20-21
M.Sc (Ag)	8	8	12	13	12	25.00	25.00	0	0	16.66

6.4.9 ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Use of ICT application in teaching and practical for curricula delivery.

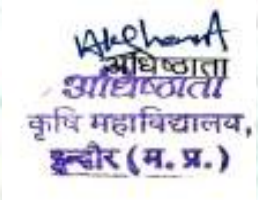
Courses/Theory Courses	**Type of ICT application**
Principles of quantitative genetics (GP-504)	Power point presentation

Yes, the faculty members of Department of Genetics and Plant Breeding use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer printer and internet connection in their offices. There is Wi-Fi facility for faculty and staff only students avail these facility from ARIS cell. This infrastructure provides opportunities for the use of ICT in quality teaching, research and extension. Faculty members use power point presentations in teaching all courses at UG and PG level. For PG students emails are also used.

6.4.10 The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG and PG Degree Programmes, separately, and to be presented College-wise.

6.4.11 Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weight age for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12 Certificate (Applicable when SAR is submitted for Programme**)** I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.



Signature of the Dean of the college with Date & Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1718
Dated : 08/11/2021

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

Dean
College of Agriculture
INDORE

6.4

(5) M.Sc. (Ag.) Entomology

The department was established since inception of the institution in year. Initially this department was running the courses up to the standard of B.Sc. (Ag.) degree programme. In year 1985 for the first time M.Sc. (Ag.) degree programme of this department was started with four seats and in year 2002, the seats were increased to ten students. Later on, in year 2010 the new course curriculum (as per the recommendation of 4th Dean's committee) was adopted by the VV and post graduate degree programme was opted in the Entomology discipline with eight seats.

Since, the academic year 1985 – 86 till date 163 students have been completed the post graduate degree programme successfully and it is a matter of proud that more than 90% students are placed in govt. and private sectors throughout the country.

6.4.1 Brief History of Degree Programme

Name of the degree programme: **M.Sc.(Ag.) Entomology**

- Department has been initiated in 1985-86 to till date 163 students completed the post graduate degree programme successfully. Admitted students conducted their research in the field of collection, evaluation and characterization of different insects and Screening of Genotypes of Sorghum, Safflower, Soybean, Gram and Potato crops *etc*. against their major pests. Chemical control of major pests of different crops *viz*. Sorghum, Safflower, Potato and Cotton IPM in Sorghum, Safflower and Potato crops, Effect of Sowing dates of Sorghum, Safflower against major pests. In extension: To fulfill the requirement for the state agricultural department, banking sector and fertilizer industries.

Objectives of initiating M. Sc. Programme	To impart theoretical and practical knowledge of Entomology to the students through course work programme, Hans on training, practical, Field research. To update the students through research work and practical work necessary for management of insect pests.

Accomplishment of M. Sc. Programme	**During 2016-17 to 2020-21** 27 students have been completed their degree programme and 07 students are in pipeline to submit very soon. 01 student passed National Eligibility Test conducted by ASRB. (Annexure: IV) 01 student have joined as Agriculture field officer in central government (Annexure: V)

Objective of the Department

- To impart knowledge to UG & PG students regarding Entomology
- To Implement of academic calendar in the department as per syllabus of UG and PG as per norms of ICAR, New Delhi
- To prepare of various Laboratory manual on different aspects of Entomology for UG & PG students
- To prepare question banks of Entomology courses for UG, PG and various competitive examinations

Degree Programme offered by the department	Specialization	Year of start	Number of seats					
			Y1 2016-17	Y2 2017-18	Y3 2018-19	Y4 2019-20	Y5 2020-21	Total
M. Sc. (Ag.)	**Entomology**	**1985**	**8**	**8**	**12**	**12**	**12**	**52**
No. of student passed			**8**	**3**	**3**	**0**	**0**	**14**

6.4.2 Faculty Strength:

The faculty strength of the Degree Programme need to be given cadrewise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report:

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**0**	**0**	**0**
2	Associate Professor	**1**	**1**	**1**
3	Assistant Professor	**0**	**2**	**2**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	Filled	Vacant
Laboratory staff			
Lab Technician	1	1	0
Lab Attendant	1	0	1

6.4.4 List of classroom and functional laboratories: Mention the number of class rooms and functional laboratories available for the degree programme and justify if it sufficient to meet the course curricula requirement. List major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the degree programme may be given. Mention theory and practical batches for the degree programme.

List of classroom and functional laboratories-

Number of lecture room with seating capacity	1 (with seating capacity of 30 students), 70 sq. m.
Functional laboratories	1 **(**with seating capacity of 30 students**),** 70 sq. m.

PG Class room with Multimedia and computer arrangement	70 sq. m
UG Entomology	70 sq. m
Staff Room	20 sq. m

Staff Room

PG Class Room

List of major equipments at present in the department

S. No.	Name of Instrument/Equipment	Location/ Lab No.	Photo
1.	**Compound microscope**	**PG Lab**	
2.	**Light trap**	**PG Lab**	
3.	**Insect incubator**	**PG Lab**	
4.	**Dissecting microscope**	**PG Lab**	

5.	**Insect collection boxes**	**PG Lab**	
6.	**Camera Lucida**	**PG Lab**	
7.	**Aspee Hi-tech sprayer srp 60**	**PG Lab**	

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	13	12
2017-18	13	12
2018-19	13	12
2019-20	13	12
2020-21	13	12

Theory and practical batches:

- At UG level, the department offers 03 theoretical courses, 1 RAWE and 1 ELP (Elective basis) in which ELP is completely practical and entrepreneurship skill development oriented courses.
- For theory in core courses, from 1st Sem. to 6th Sem. there are three batches with an average of about 28-30 students in each batch.
- At M.Sc. level, the Department of Entomology offers 08 theory and practical courses. There are limited seats in M.Sc. programme. Some courses are offered as minor courses for students of other departments. There is only one batch for theory classes and one batch for practical classes in all the courses.

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course

should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

PG courses:

Course Title	**Course No. / Credit hrs.**	**Practical and Hands on Training Courses**	**How far students are getting desire practical and hands on training as per the curriculum**
PG Course			
Insect Morphology	ENT 501 2 (1+1)	Study of insect segmentation and their appendages	Learn about segments of insects
Classification of Insects	ENT 504 3 (2+1)	Collection and preservation of insects. Study of Orders of insects	Indentify of insect basis of insect order and their preservation
Principles of Integrated Pest Management	ENT 510 2 (1+1)	Crop loss assessment direct losses, indirect losses, potential losses, avoidable losses and unavoidable losses	Learn about crop loss estimation and observation in field
Insect Anatomy, Physiology and Nutrition	ENT 502 3 (2+1)	To study of Structure and modification of different systems- digestive, circulatory, respiratory, nervous, and reproductive.	Learning about system and modification of various insects
Insect Ecology	ENT 505 2 (1+1)	Types of distributions of organisms. Methods of sampling insects	Collection of insects by various method of sampling
Biological control of crop pests and weeds	ENT 507 2 (1+1)	Identification of common natural enemies of crop pests (parasitoids, predators, microbes) and weed killers	Identify and explanation of bioagents and natural enemies

Toxicology of Insecticides	ENT 508 3 (2+1)	Insecticide formulations, Bioassay techniques and probit analysis	Learning about bioassay, formulations and probit analysis
Pests of field cops	ENT 511 2 (1+1)	Collection and identification of important pests and their natural enemies	Preservation and identification of insects

6.4.6 Supervision of students in PG programme:

Number of students being supervised by Faculty in case of Master's Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Details of M.Sc. programme offered by the Department

Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	08	04	1:2
2017-18	08	04	1:2
2018-19	12	04	1:3
2019-20	12	02	1:6
2020-21	12	01	1:12

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers *etc.*):

Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff. Some of the issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time, students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations. Students were advised to go to library and search of the research papers and literature

related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.

Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya,

Raja Pancham Singh Marg, Behind LNIJPE, Gwalior – 474002 (M.P.)

STUDENTS FEEDBACK PROFORMA (UG, PG and Ph.D)

Please tick the relevant box below:

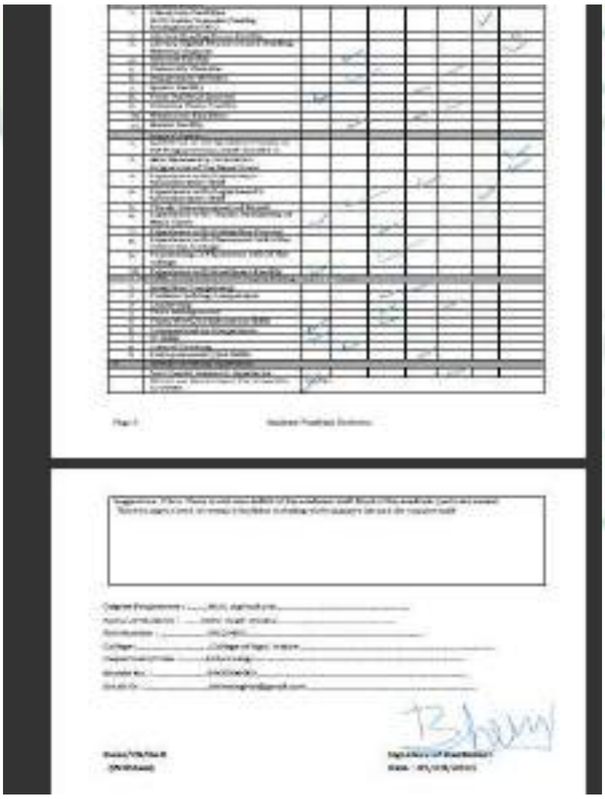
	General Questions							
	Programme of study	UG Masters ✓ Ph.D	Master					
	Semester of Study	I	II ✓	III	IV	V	VI	VII
	Residence	Hostel	PG/Rented ✓	Local	NCR	Other		
	Gender	Male	Female ✓	Others				
	Category	General	OBC ✓	SC	ST	PwD	Other	
	Attendance (Regularity in class)	> 75%	>50% and < 75%		< 50%			
	Class Strength	<40 ✓	40-80		>80			

Directions for filling the form

For each question/statement, please give your level of experience by putting a Tick (✓) against the statement from a score between 1 and 5. A higher score indicates a better experience.

Scale	1	2	3	4	5
Experience	Below Average	Average	Good	Very Good	Excellent

		1 Below Average	2 Average	3 Good	4 Very Good	5 Excellent
A.	Academic				✓	
1.	Content of Syllabi of the Courses					
2.	Extent of Syllabi Covered in the Class			✓		
3.	Delivery of Syllabi in the Class			✓		
4.	Use of Teaching Aids and ICT in the Class to Facilitate Teaching				✓	
5.	Overall Experience with Internal Assessment (Quiz, Assignments, Presentations etc.)			✓		
6.	Student Teacher Interaction				✓	
7.	Integration of Theory and Practical in Classes (wherever applicable)			✓		
8.	Stimulation for Innovative Thinking		✓			
9.	Overall Learning Experience			✓		
10.	Condition of Lab Equipment		✓			
11.	Availability of Online Resources		✓			



6.4.8 Student intake and attrition in the programme for last five years: Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016 - 17	2017-18	2018-19	2019 - 20	2020 -21	2016 - 17	2017-18	2018-19	2019 - 20	2020 -21
M. Sc. (Ag)	8	8+ 2*	12+7*	12	12	0	30	10.52	8.33	8.33

***Transferred and adjusted**

6.4.9. ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Use of ICT application in teaching and practical for curriculam delivery:

Courses/Theory Courses	Type of ICT application
Insect Morphology, ENT 501, 2(1+1)	Power point presentation, online class through Google meet, WhatsApp and Google class room
Classification of Insects, ENT 504, 3(2+1)	Power point presentation, online class through Google meet, WhatsApp and Google class room
Principles of Integrated Pest Management, ENT 510, 2 (1+1)	Power point presentation, online class through Google meet, WhatsApp and Google class room
Insect Anatomy, Physiology and Nutrition, ENT 502, 3 (2+1)	Power point presentation, online class through Google meet, WhatsApp and Google class room
Insect Ecology, ENT 505, 2 (1+1)	Power point presentation, online class through Google meet, WhatsApp and Google class room
Biological control of crop pests and weeds, ENT 507, 2 (1+1)	Power point presentation, online class through Google meet, WhatsApp and Google class room
Pests of field cops, ENT 511, 2 (1+1)	Power point presentation, online class through Google meet, WhatsApp and Google class room

Yes, the faculty members of Department of Plant Pathology use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer printer and internet connection in their offices. There is Wi-Fi facility for faculty and staff only students avail these facilities from ARIS cell. This infrastructure provides opportunities for the use of ICT in quality teaching,

research and extension. Faculty members use power point presentations in teaching all courses at UG and PG level. For PG students emails are also used.

6.4.10. The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11. Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weight age for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12. Certificate (Applicable when SAR is submitted for Programme) I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university.

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

Signature of the Dean of the college with Date & Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1719
Dated : 08/11/2024

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

Dean
College of Agriculture
INDORE

6.4

(6) M.Sc. (Ag.) Agricultural Extension

The department was established since inception of the institution in year. Initially this department was running the courses up to the standard of B.Sc. (Ag.) degree programme. In year 1959 for the first time M.Sc. (Ag.) degree programme of this department was started with four seats and in year 2006, the seats were increased to eight students. Later on, in year 2010 the new course curriculum (as per the recommendation of 4th Dean's committee) was adopted by the VV and post graduate degree programme was opted in the Agricultural Extension and Communication discipline with twelve seats. Since, the academic year 2016-17 to 2020-21 till date 32 students have been completed the post graduate degree programme successfully and it is a matter of proud that more than 85 % students are placed in govt. and private sectors throughout the country.

Objective of the Department

- To conduct teaching, UG & PG students in Agricultural Extension and Communication.
- To carry out extension activities in the field using, extension education methodologies and approaches.
- To acquaint the students with practical know how for conducting training and various kinds of demonstrations at farmers field.
- To organize training, Kisan Mela, Meeting etc.
- Proper dissemination of ideas generated.
- To maintain direct contact with the farmers.

6.4.1 Brief History of Degree Programme

Name of the degree programme: **M.Sc.(Ag.) Agricultural Extension & Communication**

- Department has been initiated in 2006 till date 112 students completed the post graduate degree programme successfully. Admitted students conduct their research in the village survey for collection and evaluation of data. The Department has worked to produce quality and specialized professionals in extension education in areas of transfer of technology, communication, adoption and diffusion, front line demonstration of technologies for agriculture and allied activities.

Objectives of initiating M. Sc. Programme	✓ To impart theoretical and practical knowledge of Agricultural Extension to the students through course work programme, Hans on training, practical, field visit, Demonstration etc. ✓ To update the students through extension and survey work. ✓ To acquaint the students with practical know how for conducting training and various kinds of demonstrations at farmers field. ✓ To carry out extension activities in the field using, extension education methodologies and approaches.
Accomplishment of M. Sc. Programme	During 2016-17 to 2020-21 32 students have been completed their degree programme 1 student passed National Eligibility Test conducted by ASRB. (Annexure: 1)

	01 student has joined as Agriculture Field Officer in Union Bank of India, & 01 student placed as Junior Assistant General in Cotton Corporation of India. Both students in Central Government.

6.4.1 Accomplishment of M.Sc. (Agricultural Extension and Communication) (2016-2017 to 2020-21)

Degree Programme offered by the department	Specialization	Year of start	Number of seats						Number of students passed out					
M. Sc (Ag)	Agricultural Extension and Communication		Y1	Y2	Y3	Y4	Y5	Total	Y1	Y2	Y3	Y4	Y5	Total
		2006	8	8	12	12	12	52	8	8	9	7	-	32

6.4.2 Faculty Strength:

The faculty strength of the Degree Programme need to be given cadre wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**0**	**0**	**0**
2	Associate Professor	**0**	**0**	**0**
3	Assistant Professor	**0**	**3**	**3**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	Filled	Vacant
Laboratory staff			
Lab Technician	0	0	0
Lab Attendant	1	0	1

Technical and supporting staff not available separately in the departments

6.4.4 Classrooms and Laboratories:

List of classroom and functional laboratories:

Number of lecture room with seating capacity	1 with 30 sitting capacities
Number of labs with specialized instruments	1 Classroom for UG & PG practical work
Farm facilities	Nil

List of major equipments available in the department

S. No.	Name of Instrument/Equipment	Photos
1	Record player	
2	Slide projector	
3	Tape recorder	
4	Overhead projector	

5	Gramophone	
6	Handy cam	
7	Television	
8	Computer	
9	Printer	

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	**11**	**10**
2017-18	**11**	**10**
2018-19	**11**	**10**
2019-20	**11**	**10**
2020-21	**11**	**10**

Theory and practical batches:

At UG level, the department offers 05 courses, & RAWE & Agro-Industrial Attachment (AIA) in which the Rural Agricultural Work Experience (RAWE) students will undertake this during the seventh semester, the student has a total duration of 24 weeks (0 +20 credit hours). RAWE (0+16 credit hours) and AIA will conduct the program with (0+4 credit hours) with General orientation and on campus training by different faculties for 2 weeks, Village attachment for 16 weeks, Agro-Industrial Attachment for 4 weeks and Project report preparation, presentation & evaluation for 2 weeks.. Rural Agricultural Work Experience (RAWE) the students to understand the rural situations, status of agricultural technologies adopted by farmers, prioritize the farmers' problems and to develop skills and attitude of working with farm families for overall development in rural areas.

AIA the students shall involve themselves in the activities and tasks during duration viz. acquaintance with industry and staff, study of structure, functioning, objective and mandates of the industry, study of various processing units and hands-on trainings under supervision of industry staff, ethics of industry, employment generated by the industry, contribution of the industry promoting environment, learning business network including outlets of the industry, skill development in all crucial tasks of the industry, documentation of the activities and task performed by the students. Industries include Seed/Sapling production, Pesticides-insecticides, Post-harvest processing, value addition, Agri-finance institutions, etc.

For theory in core courses, from 1st Sem. to 6th Sem. there are three batches with an average of about 28-30 students in each batch.

- At M.Sc. level, the department of Agricultural Extension and Communication offers 11 theory and 10 practical courses. There are limited seats in M.Sc. programme. Some courses are offered as minor courses for students of other departments. There is only one batch for theory classes and one batch for practical classes in all the courses.

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

Course Title	Course No./ Credit hrs.	Practical and Hands on Training Courses	How far students are getting desire practical and hands on training as per the curriculum
PG Courses Practical Exercise M.Sc. Previous Year I Sem			
Development Perspectives of Extension Education	**(EXT-501) 2 (1+1)**	• Visit to Gram Panchayat to Study on - going Rural Development Programme. • Visit to KVK, NGO and Extension centres of State Agricultural University and State Department. • Bottom up planning. • Report preparation and Presentation	• Learnt about the various ongoing programmes related to Rural Development. • Functioning of the KVK'S, NGO'S. • Planning techniques were learnt. • Students studied how to prepare Report and give effective presentation.
Development Communication and Information Management	**(EXT-502) 3 (2+1)**	• Identification of characteristics of key communicators of villages. • Practical ways to improve oral presentation skill. • Preparation of bulletins and folders. • Scripting writing for newspapers, magazine, articles, radio and television. • Preparation of Tele conferencing. • Study of barriers in communication. • Study the role of mass media & media mix in dissemination of Agricultural technology.	• Identification of Communicators in the village was done helping in various agricultural activities. • Tips of oral presentation were learnt. • Learnt how to prepare bulletins and folders. • Learn script writing for different Medias. • Became aware of teleconferencing. • Identified various barriers to communication. • Role of mass media and other sources were identified and studied.
Diffusion and Adoption of Innovations	**(EXT-503) 3 (2+1)**	• Case studies in individual and community adoption process. • Content analysis of adoption studies. • Identification of adopter categories on a selected technology. • Study of attributes of current farm technologies. • Identification of opinion leader. • Sources of information at different stages of adoption on a selected technology.	• Learnt to handle case studies • Content analyses of various adoption studies were studied. • Identification of adopter categories. • Farm technologies were learnt. • Learnt to identify opinion leaders. • Source of information identified. • Factors responsible for increase or decrease in rate of adoption were identified.

		• Study of factors increasing or retarding the rate of adoption. • Presentation of reports on adoption and diffusion of innovations.	• Presentation of Reports.
e- Extension	**(EXT-505) 3 (2+1)**	• Agricultural Content Analysis of ICT Projects. • Handling of ICT tools. • Designing extension content. • Online extension service and project work on ICT enabled extension. • Creation of extension blogs. • Visit to ICT extension projects.	• Analysis of ICT Projects. • How to handle ICT Tools. • Designing of extension contents. • Works related to ICT enabled extension. • How to create extension blogs. • Visits to ICT extension projects to gain knowledge.

PG Courses Practical Exercise M.Sc. Previous II Sem

Course Title	Course No./ Credit hrs.	Practical and Hands on Training Courses	How far students are getting desire practical and hands on training as per the curriculum
Research Methods in Behavioral Sciences	**(EXT-504) 3 (2+1)**	• Selection and formulation of research problem. • Formulation of objectives and hypothesis. • Selection of variables based on objectives. • Developing the conceptual framework of research. • Operationally defining the selected variables. • Development of data collection devices- Testing the validity and reliability of the data collection instruments. • Pre-testing of the data collection instrument. • Techniques of interviewing and collection of data using the data collection instrument- data processing. • Hands on experiences on SPSS, coding, tabulation and analysis. • Formulation of secondary tables based on objectives	• Identification of research problem. • Learnt Formulation of objectives and hypothesis. • Objective based Selection of variables. • Studies and learnt conceptual framework of research. • Defining of variables. • Testing the validity and reliability of the data collection instruments was learnt. • Testing of instruments. • Techniques of interviewing and collection of data learnt. • Experiences on various methods were studied.

		of research, writing report, writing of thesis and research articles presentation of reports.	• How to formulate secondary tables based on collected data.
Entrepreneurship Development and Management in Extension	**(EXT-506) 3 (2+1)**	• Field visit to successful enterprises- Study of characteristics of successful entrepreneurs development of project proposal. • Case studies of success/ failure enterprises. • Exercise on market survey. • Field visit to financial institution- simulated exercise to understand management process. • Field visit to extension organizations to understand the functions of management. • Group exercise on development of short term and long term plan. • Simulated exercise on techniques of decision making. • Designing organizational structure. • Group activity on leadership skills.	• Field visit to successful enterprises- to study characteristics of successful entrepreneurs. • Analyses of success and failure stories of entrepreneurs. • How to conduct market survey. • Visit to financial institution to understand management process. • Understanding the functions of management through field visit. • How to develop short term and long term plan. • Decision making techniques. • How to design organizational structure. • Development of leadership skills.
Human Resource Development	**(EXT-507) 3 (2+1)**	• Visit to different training organization to review ongoing activities & facilities. • Analysis of Training methods followed by training institutes for farmers and extension workers. • Studies on evaluation of training programmes. • Study of HRD in organization in terms of performance. • Organizational development, employees" welfare and improving quality of work life and Human recourse information, Presentation of reports.	• Learnt to review ongoing activities & facilities in organizations. • Analysis of Training methods for farmers and extension workers. • How to evaluate training programmes. • Study of HRD activities. • Learnt the art of improving quality of work life and Human recourse information, Presentation of reports.

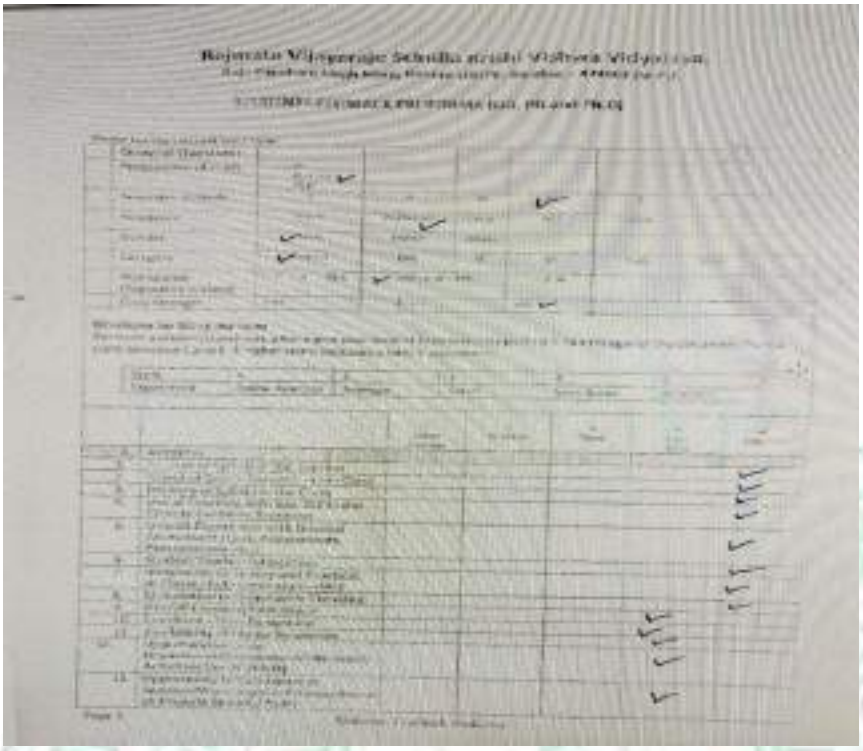
6.4.6 Supervision of students in PG programme: Number of students being supervised by Faculty in case of Masters Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

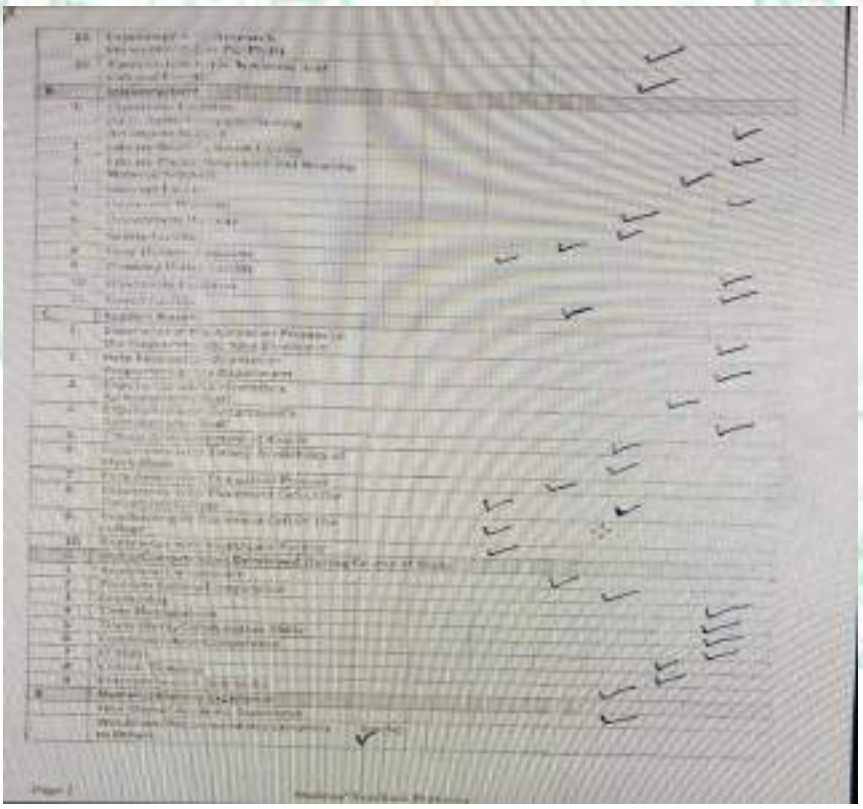
Details of M.Sc. programme offered by the Department

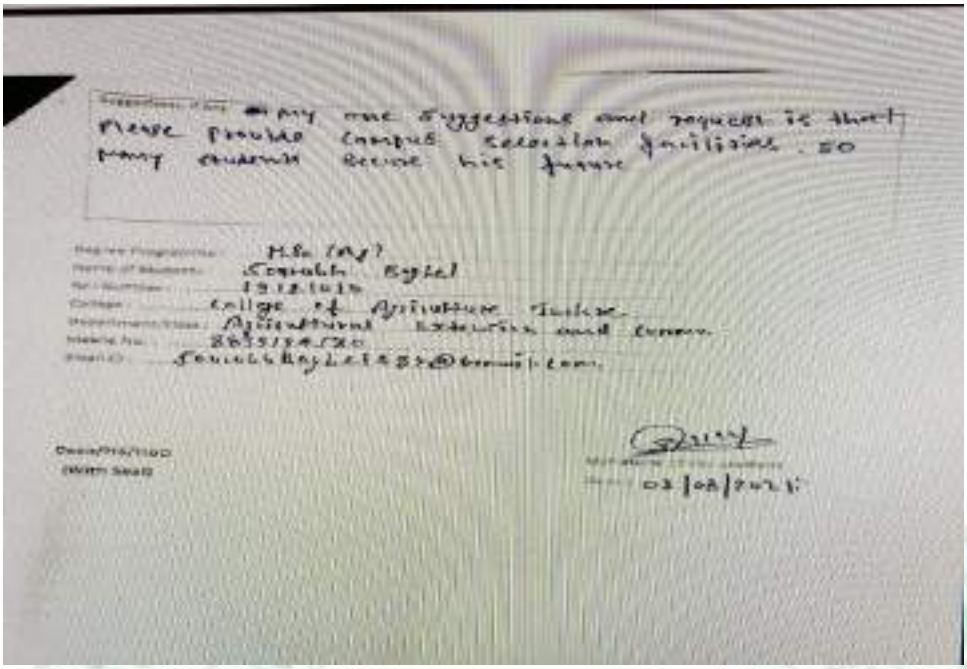
Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	8	03	1:27
2017-18	8	04	1:2
2018-19	12	04	1:3
2019-20	12	03	1:3
2020-21	12	01	1:12

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff. Some of the issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time, students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations. Students were advised to go to library and search of the research papers and literature related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.







6.4.8 Student intake and attrition in the programme for last five years: Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Degree Programme offered by the department	Specialization	Year	Actual student admitted in last five years	Attrition (%)
M. Sc .(Ag)	Agricultural Extension and Communication	**2016 – 17**	8	13.00
		2017 – 18	8	0
		2018 – 19	12+1*	23.07
		2019 – 20	12	41.67
		2020 - 21	12	---

***Transferred and adjusted**

6.4.9 ICT Application in Curricula Delivery:

Yes, the faculty members of Department of Agricultural Extension and Communication use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer printer and internet connection in their offices. There is Wi-Fi facility for faculty and staff only students avail these facilities from ARIS cell. This infrastructure provides opportunities for the use of ICT in quality teaching, research and extension. Faculty members use power point presentations in teaching all courses at UG and PG level. For PG students emails are also used.

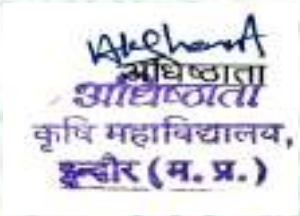
Use of ICT application in teaching and practical for curricula delivery.

- Created WhatsApp group for sharing information of the students.
- Online Teaching for UG & PG Courses.
- Prepared Power Point Presentation with audio & video.
- Created Google classroom for submission of assignments.
- Created Google form for collected students' information.

6.4.10 The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG Degree Programmes, separately, and to be presented College-wise.

6.4.11 Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weight age for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12 Certificate (Applicable when SSR is submitted for Programme) I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university



Signature of the Dean of the college with Date & Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1720
Dated : 08/11/2024

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

College of Agriculture
INDORE

6.4

(7) M.Sc. (Hort.) Vegetable Science

In order to initiate, strengthen and develop the agricultural research and education in Central India, Institute of Plant Industry (IPI) was established in the year 1924 at Indore. The glorious work was done by the Institute of Plant Industry during 1924 to 1957 in the field of agriculture, including crop management. The new Madhya Pradesh State was formed on November 1, 1956 and the Madhya Pradesh Agricultural Research Institute (MPARI) has been established to strengthen the Agricultural research in the state. The College of Agriculture Indore came in to functioning in the year 1959, under the jurisdiction of Vikram Vishwa Vidyalaya, Ujjain utilizing building and infrastructure of IPI . Plant Pathology department played a keyrole in teaching of subjects since inception of the college. The Madhya Pradesh Agricultural University (JNKVV) was started in the year 1964. In the year 2008 Govt. of M.P. divided JNKVV in two part and formed new Agricultural University Rajmata VijyarajeScindia Krishi Vishwa Vidyalaya , Gwalior with 25 district of M.P. and after 2008 College of Agriculture Indore comes under newly formed university to integrate teaching, research and extension activities in agricultural field of the state at university level. The faculty of Agriculture in the university was formed in the year 1987 with Plant Pathology as the largest department with UG and PG teaching at each campus of the university.

Objective of the Department

- To carry out research with emphasis in Vegetable Sciences
- To develop technologies in Vegetable Science
- To transfer vegetable technologies, their assessment and refinement

6.4.1 Brief History of Degree Programme: Clearly mention in which year the degree program was initiated along with its objective and accomplishments.

Name of the degree programme: **M.Sc.(Ag./Hort) Vegetable Science**

- Department has been initiated in 1994-95 to till date142 students completed the post graduate degree programme successfully. Admitted students conducted their research in the field of collection, evaluation and characterization of different vegetable crops, Determination of PGRs for crop growth, use of organic resources and integrated nutrient management for crop productivity and crop quality, Implications of climate change and impact of Conservation technology on crop plant, weed growth and behavior of herbicides inputs on different vegetable crops.

Objectives of initiating M. Sc. Programme	To impart theoretical and practical knowledge of Horticulture to the students through course work programme, Hands on training, practical, Field research. To update the students through research work and practical work necessary for production, management and quality aspects.

Degree Programme offered by the department	Specialization	Year of start	Number of seats						Number of students passed out					
			Y1	Y2	Y3	Y4	Y5	Total	Y1	Y2	Y3	Y4	Y5	Total
M.Sc. (Ag)	Horticulture - Vegetable Science	1994	08	08	12	12	12	52	8 +2 *	7	8	3	--	28
Accomplishment of M. Sc. Programme			During 2016-17 to 2020-21, 28 students have been completed their degree programme and 10 students are in pipeline to submit very soon. 11 students passed National Eligibility Test conducted by ASRB. (Annexure: IV) 02 student have joined as Quality control officer in state government, 01 student placed as Technical Officer in DRDO and 01 student placed as Agriculture Field Officer (Annexure:V)											

*Transferred students from Gwalior to Indore were also passed

6.4.2 Faculty Strength:

The faculty strength of the Degree Programme need to be given cadre wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report.

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**0**	**0**	**0**
2	Associate Professor	**0**	**0**	**0**
3	Assistant Professor	**3**	**1**	**4**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	Filled	Vacant
Laboratory staff			
Lab Technician	1	0	1
Lab Attendant	1	0	1

6.4.4 Classrooms and Laboratories: Mention the number of class rooms and functional laboratories available for the degree programme and justify if it is sufficient to meet the course curricula requirement. Lists major equipments, laboratories, farm facilities, workshops and other instructional units being utilized for the award of the Degree Programme may be given. Mention theory and practical batches for the Degree Programme.

List of classroom and functional laboratories

Number of lecture room with seating capacity along with with LCD projector	One, seating capacity 40 students
Number of labs	**One**
Farm facilities	**1 hectare**

List of major equipments at present in the department

S. No	Equipment's	Location	Photos
1	Oven	UG & PG lab	

2	Deep freezer	UG & PG lab	
3	Hot plate	UG & PG lab	
4	Electric balance	UG & PG lab	
5	Mixer grinder	UG & PG lab	
6	Over head projector	UG & PG lab	
7	Juice and pulp extractors	UG & PG lab	

8	Corcking machine	UG & PG lab	
9	Brix meter	UG & PG lab	

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	11	11
2017-18	11	11
2018-19	11	11
2019-20	11	11
2020-21	11	11

Theory and practical batches

At UG level, the department offers 05 courses, 1 RAWE and 2 ELP (Elective basis) in which ELP is completely practical and entrepreneurship skill development oriented courses.

For theory in core courses, from 1st Sem. to 6th Sem. there are three batches with an average of about 28-30 students in each batch.

• At M.Sc. level, the department of horticulture- vegetable science offers 11 theory and practical courses.. There are limited seats in M.Sc. programme. Some courses are offered as minor courses for students of other departments. There is only one batch for theory classes and one batch for practical classes in all the courses.

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

Course Title	Course No./ Credit hrs.	Practical and Hands on Training Courses	How far students are getting desire practical and hands on training as per the curriculum
Production technology of cool season vegetable crops	**(VSC- 501) 3(2+1)**	• Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Potato • Cultural operations (fertilizer application, sowing, mulching, and irrigation weed control) of Cabbage, Cauliflower, Knolkhol, sprouting	• Students were all trained in the package of practices of different vegetable crops

		broccoli and Brussels sprout. • Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Carrot, radish • Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Onion and garlic • Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Peas and beans, • Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Green leafy cool season vegetable	
Production technology of warm season vegetable crops	**(VSC- 502) 3(2+1)**	• Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Tomato, eggplant, peppers • Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Okra, beans, cowpea • Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Cucurbitaceous crop • Cultural operations (fertilizer application, sowing, mulching, irrigation weed control) of Tapioca, Sweet Potato and Colocasia • Physiological disorders of warm season vegetable crops.	• Students were expertise in nursery preparation and package of practices of different vegetable crops
Breeding of vegetable crops	**VSC-503 3(2+1)**	• Selection of desirable plants from breeding population	• What is a procedure of selection of desirable plants
		• Observations and analysis of various qualitative and	• Observations and analysis of various qualitative and

		qualitative traits in germplasm	quantitative traits in germplasm
		• Hybrid seed production by breeding methods	• How to select breeding method for hybrid seed production
		• Study of Molecular marker techniques	• Different Molecular marker techniques
Growth and development of vegetable crops	**VSC-504 3(2+1)**	• Preparation of solutions of plant growth regulators and their application	• Make the solution of PGRs and their application procedure
		• Breaking and induce of dormancy in vegetable	• How can breaking and induce of dormancy by mechanical, physiology and chemical
		• Parthenocarpy and fruit ripening of vegetable crops	• Induction of Parthenocarpy, Apomixis and fruit ripening
		• Changing sex expression in cucurbits	• Changing sex expression in cucurbits by different PGR and Chemical
Tropical and dry land fruit production	**FSC-501 3(2+1)**	• Identification of important cultivars of fruits	• To learn the Identification of important cultivars of fruit crops.
		• Observations on growth and development of fruit crops	• Growth curves and phases of the development of the fruit crops learnt.
		• Preparation for establishing commercial orchards	• Important points for establishing commercial orchard of tropical and dry land fruit.
Propagation of nursery management for fruit crops	**FSC-505 3(2+1)**	• Propagation methods of fruit crops	• How can propagated of new plant of fruit crops by different propagation methods
		• Study of different propagation media	• Use of media for propagation in fruit crop and different media
		• Nursery management of commercially important fruits	• How can manage the young plant in nursery of fruit crops
		• To study techniques of micro-propagation	• Different methods of Micropropagation *i.e.,* in vitro clonal, meristem, shoot tip, axillary bud and cell culture.

M.Sc. – IInd Semester

Course Title	**Course No./**	**Practical and Hands on Training Courses**	**How far students are getting desire practical and**

	Credit hrs.		hands on training as per the curriculum
Seed production technology of vegetable crops	**VSC-505 3(2+1)**	• Seed sampling of different vegetable crops • Floral biology of Potato, Tomato, Brinjal • Floral biology of Chili, Pea, Pumpkin, • Floral biology of Cucumber, Bottle gourd, Okra • Seed extraction techniques, • Rouging of off-type	• Students gained knowledge in identification of representative sample, floral biology of different vegetable crops have been learnt.
Production technology of underexploited vegetables crops	**VSC-507 3(2+1)**	• Identification of seed of underexploited vegetables	• Identification of seed of underexploited vegetables
		• Study of botanical description of plants	• Botanical description of underexploited vegetables
		• Study of planting and planting material	• Different planting methods and their materials
Organic vegetables production technology	**VSC-508 2(1+1)**	• Preparation of compost and vermicomposting	• Make the procedure of composting and vermicomposting and their methods
		• Preparation of biofertilizers, bio-pesticides and green manures	• Make the procedure of biofertilizers, bio-pesticides and green manures
		• Study of application of compost, vermicompost green manure and biofertilizers	• How to applied of compost, vermicompost green manure and biofertilizers and different application methods
		• Weed management in organic horticulture	• How can manage the weed in horticultural field
Canopy management in fruit crops	**FSC-504 3(2+1)**	• Study of different type of canopy	• About the type of canopy management
		• Study of training and pruning methods	• How can manage the canopy of trees by training and pruning

		• Study on effect of different canopy on production and quality	• Effect of different canopy on production and quality of fruits
		• Study of PGRs of growth and development of fruit crops	• Use of different PGRs and effect the growth and yield of fruits
Growth and development of horticultural crops	**FSC-508 3(2+1)**	• Study of dormancy of seed and bulb of fruits	• How to breaking and induction of dormancy in fruit crops
		• Techniques of growth analysis	• Different method of growth of analysis
		• Study of subtropical and temperate horticultural zones	• Separation of subtropical and temperate horticultural zones based on growth and development patterns.
		• Study of growth regulator functions	• Function of growth regulators on fruit crops

6.4.6 Supervision of students in PG programme: Number of students being supervised by Faculty in case of Masters Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

Details of M.Sc. programme offered by the Department

Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	**10 (8+2*)**	**05**	**1:2**
2017-18	**8**	05	**1:1.6**
2018-19	**12**	04	**1: 3**
2019-20	**13 (12+1*)**	04	**1:3.25**
2020-21	**12**	04	**1: 3**

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff.

Some of the issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time, students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations. Students were advised to go to library and search of the research papers and literature related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.

6.4.8 Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Program me	Actual student admitted in last five years					Attrition (%)				
	2016-17	**17-18**	**18-19**	**19-20**	**20-21**	**2016-17**	**17-18**	**18-19**	**19-20**	**20-21**
M.Sc (Ag)	**8+2***	**8**	**11+1***	**12+1***	**11**	**0**	**0**	16.66	0	0

Transferred and adjusted

6.4.9 ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Use of ICT application in teaching and practical for curricula delivery.

Courses/Theory Courses	**Type of ICT application**
FSC-504, VSC-507, VSC-505, FSC-501	**PPT**

Yes, the faculty members of Department of horticulture-vegetable science use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer printer and internet connection

in their offices. There is Wi-Fi facility for faculty and staff only students avail this facility from ARIS cell. This infrastructure provides opportunities for the use of ICT in quality teaching, research and extension. Faculty members use power point presentations in teaching all courses at UG and PG level. For PG students emails are also used.

6.4.10 The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG and PG Degree Programmes, separately, and to be presented College-wise.

6.4.11 Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weight age for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12 Certificate (Applicable when SAR is submitted for Programme)

I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 is furnished as per the records available in the college, and degree awarding university.

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

Signature of the Dean of the college with Date & Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1722
Dated : 08/11/2024

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

College of Agriculture
INDORE

6.4

(8) M.Sc. (Ag.) Agricultural Economics

The department was established since inception of the institution in the year 1959. Initially this department was running the courses up to the standard of B.Sc.(Ag.) degree programme. However PG in Agricultural Economics started in the year 1983. The objectives of the Department are:

- To collect the regiment data analysis by using the scientific tools and techniques.
- To help the policy makers in planning for betterment of farmers and state as well as country as a whole.

Later on, in year 2010 the new course curriculum (as per the recommendation of 4th Dean's committee) was adopted by the VV and post graduate degree programme was opted in the Agricultural Economics with eight seats.

Since, the academic year 1983-84 till date ,138 students have completed the post graduate degree programme successfully and it is a matter of pride that many of the students have been placed in govt. and private sectors throughout the country.

6.4.1 Brief History of Degree Programme

Name of the degree programme: **M.Sc.(Ag.) Agricultural Economics**

- Department has been initiated in 1983-84 to till date and 138 students have completed the post graduate degree programme successfully. Admitted students have conducted their research in the field of arrivals, demand and supply of various agricultural commodities, price spread, calculation of profitability, cost of cultivation, profit issues of the farmers ,Producer's share in consumer rupee, Improving the net profit of the producers, general problems related to agricultural finance and value addition and processing of agricultural commodities.

Objectives of initiating M. Sc. Programme	To impart theoretical and practical knowledge of Agricultural Economics to the students, to analyze the aspects influencing agriculture economy and proper distribution of resources through course work programme, Hands on training, practical as well as teaching how to maximize profitability in agriculture for the benefit of society.
Accomplishment of M. Sc. Programme	During 2016-17 to 2020-21 27 students have completed their degree programme.

Degree Programme offered by the department	Specialization	Year of start	Number of seats					
			2016-17	2017-18	2018-19	2019-20	2020-21	Total
M.Sc (Ag)	Agri. Eco.	1983	8	8+3*	7+1*	8-1#	5	35+4
Student passed out			8	8	6	5	-	27

*Transferred and Adjusted # Discontinued

Objective of the Department

- To enhance the knowledge of Agricultural Marketing
- To enhance the knowledge about financial institutions
- To provide information of Cost of Cultivation
- To prepare question banks of Agricultural Economics courses for UG, PG and various competitive examinations

6.4.2Faculty Strength:

The faculty strength of the Degree Programme needs to be given cadre wise, both sanctioned and in-place (under the table mentioned below). Clearly mention the number of permanent faculty appointed for the Degree Programme, part time faculty being deputed from the other departments (in such case mention the name of these departments). If the Degree Programme is also taking the help of Research staff, extension staff, contractual faculty, guest faculty, adjunct faculty or any other arrangement being made to complete the curriculum, it should be clearly mentioned in the report

SN	Sanction Faculty	Faculty in Place	Vacant Position	Faculty recommended By ICAR/UGC/VCI/Other regulatory bodies
1	Professor	**1**	**0**	**1**
2	Associate Professor	**0**	**1**	**1**
3	Assistant Professor	**0**	**2**	**2**

*Note: All the faculty of this programme is assigned the responsibilities for the multiple programmes.

6.4.3 Technical and Supporting Staff: Technical and supporting staff not available separately in the departments

	Sanctioned	Filled	Vacant
Laboratory staff			
Lab Technician	0	0	0
Lab Attendant	1	0	1

6.4.4 Classrooms and Laboratories:

List of classroom and functional laboratories

Number of lecture room with seating capacity	**One (with seating capacity of 30students)**
Number of lectures with LCD facilities	**1**

List of major equipment at present in the department

S. No.	Name of Instrument/Equipment	Location/ Lab No.	
1	**Computer with accessories-4**	**3 in the Faculty cabin and 1 in the classroom**	
2	**Projector**	**1 in the classroom**	
3	**Printer**	**2 in the Faculty cabin**	

Mention theory and practical batches for PG Programmes

Year	Theory	Practical
2016-17	**9**	**6**
2017-18	**9**	**6**
2018-19	**9**	**6**
2019-20	**9**	**6**
2020-21	**9**	**6**

Theory and practical batches at UG level, the department offers 04 courses,

Four theory in core courses and three practical, from 1st Semester. to 6th Semester. There are three batches with an average of about 28-30 students in each batch.

At M.Sc. level, the Department of Agricultural Economics offers 9 theory and 6 practical courses. There are limited seats in M.Sc. programme. Some courses are offered as minor courses for students of other departments. There is only one batch for theory classes and one batch for practical classes in all the courses.

6.4.5 Conduct of Practical and Hands-on-Training:

It is important to have a sound grasp of the theory that underlies any professional degree. But there are some skills that can only be learned through hands-on -practice. It is important that much of the learning material in any given course should be provided in a way that allows students to get as involved as possible to increase their knowledge and abilities. Clearly mention how far students are getting desired practical and hands-on-training as per the curriculum and meeting above mentioned requirements.

Course No. /Credit Hours	**Practical and Hands-on-training**	**How far students are getting desired practical and hands –on-training as per curriculum**
Agricultural Production Economics (AGECON 504)	1. Different forms of production function	Learn about various forms of production function
	2. Yield gap analysis	Learn about difference in yield gap of researcher's and farmer's yield
	3. Cost functions	Learn about various costs of farm
	4. F- P relationship	Learn about resource allocation
	5. F-F relationship	Learn about how to minimize cost
	6. P-P relationship	Learn about profit maximization
Agricultural Marketing and Price Analysis (AGECON 505)	1. Supply and price elasticity	Learn about supply and price elasticity of products.
	2. Price spread	Learn about price rise of various products.
	3. Marketing efficiency	Learn about how maximum output can be got with minimum cost
	4.Value chain analysis	Learn about how the value of product increases
Research Methodology for Social Sciences (AGECON 506)	1.Problem identification	Learn to identify research problem
	2. Formulation of Objective	Learn to decide and formulate objectives related to the problem identified.
	3. Source of Data	Study and identify various sources from which data can be collected.

	4. Method of collection of data	Understand about different methods of data collection
Econometrics (AGECON 507)	1. Two variable regression model	Learn about dependent and independent variables
	2. Multiple regression model	Understand about multiple independent variables.
	3. Multi co linearity	Understand about highly correlated independent variables
	4. Autocorrelation	Understand correlation among error terms
Linear Programming (AGECON 508)	1Formulation of LPP	Understand about formulation of problems
	2.Graphical formulation of LP Models	Learn about graphical solution of graphical methods
	3. Simplex Method	Understand about simplex solution of graphical method
Agricultural Finance and Project Management (AGECON 509)	1. Preparation of financial statement	Learn about the preparation of financial position through the preparation of loss and profit statement
	2. Lead bank scheme	Learn about head bank of district
	3. Project appraisal techniques	Understand about various appraisal methods for project evaluation.

6.4.6 Supervision of students in PG programme:

Number of students being supervised by Faculty in case of Masters Programme (as per ICAR/UGC guidelines). Mention the realistic figure number of qualified faculty in relation to the intake of students, as per the guidelines in the matter.

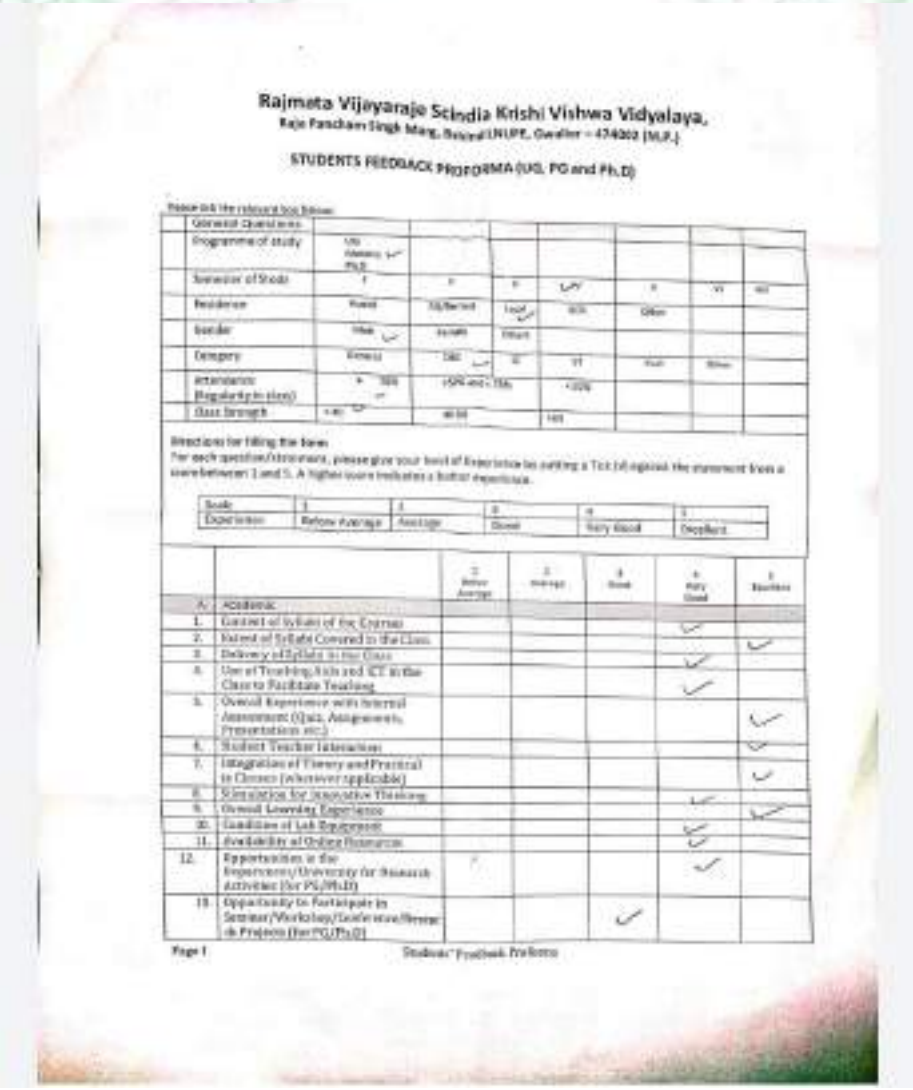
Details of M.Sc. programme offered by the Department

Year	Number of students on roll	Number of PG faculty	Teacher-student Ratio
2016-17	8	1	1:8
2017-18	8	1	1:8
2018-19	7	1	1:7
2019-20	7	1	1:7
2020-21	5	1	1:5

6.4.7 Feedback of stakeholders (Students, parents, industries, employers, farmers etc.): Mention the feedback mechanism (duly supported by the documents) from different stakeholders of the degree programme. What action the University has taken in last five years to address the issues raised in the feed back?

- Feedback from M.Sc. (Ag) is normally collected online as well as offline for their overall experience and suggestions for improvement of the programme. It is observed that most of the students are satisfied with the research facilities and support of the staff. Some of the

issues like start of Ph.D. programme are among one of the prime requirements. It has not been started due to lack of the faculty. At the same time, students needed more practical knowledge and offline classes for clearing the concept. To resolve the issue, more practical classes have been conducted as well as theoretical classes were also conducted for the preparation of NET, JRF and SRF examinations. Students were advised to go to library and search of the research papers and literature related to advance agricultural research for updating their knowledge and improving their thesis research work. Special lectures and short-term training on advance agricultural technological aspects were also conducted for updating the knowledge and clearing the concepts of the students. Students also pointed out that moreover, Job-oriented classes should be organized.



Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya,

STUDENTS FEEDBACK PROFORMA (UG, PG and Ph.D)

14.	Experience with Research Environment (for PG/Ph.D)					✓		
15.	Participation in Co-Academic And Cultural Events							✓
B.	Infrastructure							
1.	Classroom Facilities (LCD/Audio/Computer/Seating Arrangement Etc.)							✓
2.	Library Reading Room Facility							✓
3.	Library Digital Resources and Reading Material Support						✓	
4.	Internet Facility						✓	
5.	University Website						✓	
6.	Department Website						✓	
7.	Sports Facility						✓	
8.	Food Outlets/Canteens						✓	
9.	Drinking Water Facility					✓		
10.	Washroom Facilities						✓	
11.	Hostel Facility						✓	
C.	Support System					✓		
1.	Experience of the Admission process to the Programme you have Enrolled in						✓	
2.	Help Received by Orientation Programme of the Department					✓		
3.	Experience with University's Administrative Staff						✓	
4.	Experience with Department's Administrative Staff						✓	
5.	Timely Announcement of Result					✓		
6.	Experience with Timely Availability of Mark Sheet					✓		
7.	Experience with Evaluation Process						✓	
8.	Experience with Placement Cell of the University/College						✓	
9.	Functioning Of Placement Cell Of The college					✓		
10	Experience with Healthcare Facility					✓		
D.	Skills/Competencies Developed During Course of Study							
1	Analytical Competency						✓	
2	Problem Solving Competence							✓
3	Leadership							✓
4	Time Management							✓
5	Team Work/Collaboration Skills						✓	
6	Communication Competence						✓	
7	IT Skills						✓	
8	Critical Thinking						✓	
9	Entrepreneurial /Job Skills							✓
E.	Overall University Experience							
	Your Overall Academic Experience						✓	
	Would you Recommend this University to Others	Yes/No		[illegible]				

2 / 3

Suggestions, If Any:

Degree Programme: M.Sc (Agril Economics)

Name of Students: Shubham Patel

Roll Number: 18129976

College: College of Agriculture Indore

Department/Class: Agril Economics final year

Mobile No.: 95696 82569

Email ID: Shubhipatel97@gmail.com

Dean/HS/HoD (With Seal)

Signature of the student

Date: 07/08/2021

6.4.8 Student intake and attrition in the programme for last five years:

Year wise information on sanctioned strength, actual intake and attrition in the last five years of the Degree Programme, in the tabular form, shall be provided.

Name of the Degree Programme	Actual student admitted in last five years					Attrition (%)				
	2016-17	**17-18**	**18-19**	**19-20**	**20-21**	**2016-17**	**17-18**	**18-19**	**19-20**	**20-21**
M.Sc (Ag)	**8**	**8+3***	**7+1***	**8**	**5**	**0.00**	0.00	0.00	12.50	0.00

***Transferred and adjusted**

6.4.9 ICT Application in Curricula Delivery:

The ICT is now integral part of the teaching programme. ICAR has also been promoting the use of ICT in teaching and practical. Mention whether the Degree Programme is meeting the expectations. If there is any shortfall, it shall be clearly mentioned.

Use of ICT application in teaching and practical for curricula delivery.

Courses/Theory Courses	Type of ICT application
AEC 111 Fundamental Of Agricultural Economics 2(2+0)	Computer and projector used for Theory, audio visual aids.
AEC 211 Agricultural Finance and Cooperation 3(2+1)	Computer and projectors for theory. For practicals visit to Financial Institutions, corporation , Mandi's etc.
AEC 221 Agricultural Marketing, Trade and Prices 3(2+1)	Computer and projector for theory. Practicals involve mandi and varied market visits, trade houses, local retail and wholesale markets.
AEC 321 Farm Management, Production and Resource Economics 2(1+1)	Computer and projector involved for teaching, Visit to Institutional Farms
Post Graduate Course	
AGECON 501 Micro Economic Theory and Application 2 (2+ 0)	Computer and projector involved for teaching
AGECON 502 Macro Economics and Policy 2 (2+0)	Computer and projector involved for teaching
AGECON 503 Evolution of Economic Thought 1 (1+0)	Computer and projector involved for teaching
AGECON 504 Agricultural Production Economics 2 (1+1)	Computer and projector involved for teaching

AGECON 505 Agricultural Marketing and Price Analysis 3 (2+1)	C visit to Financial Institutions, corporation , Mandi's etc. computer and projector involved for teaching
AGECON 506 Research Methodology for Social Sciences 2 (1+1)	Computer and projector involved for teaching
AGECON 507 Econometrics 2 (1+1)	Computer and projector involved for teaching
AGECON 508 Linear Programming 3(2+1)	Computer and projector involved for teaching
AGECON 509 Agricultural Finance and project Management 3(2+1)	Computer and projector involved for teaching visit to Financial Institutions, corporation , Mandi's etc.

Yes, the faculty members of Department of Agricultural Economics use ICT in teaching and practical. There is one Seminar Room with computer, LCD projector and internet connection. All faculty members have computer, printer and internet connection in their offices. There is Wi-Fi facility for faculty and staff only . Students avail these facility from ARIS cell. This infrastructure provides opportunities for the use of ICT in quality teaching, research and extension. Faculty members use power point presentations in teaching all courses at UG and PG level. For PG students emails are also used.

6.4.10 The information pertaining to 6.4.1 to 6.4.9 shall be provided for each one of UG, PG and PhD Degree Programmes, separately, and to be presented College-wise.

6.4.11 Since the accreditation of Programmes is related to the All India Admission from ICAR and also having weight age for College accreditation, therefore the data presented in the section 6.4 is liable to the verification at any stage.

6.4.12 Certificate (Applicable when SSR is submitted for Programme)

I, the Dean Prof. Ashok Kumar Sharma hereby certify that the information contained in the Section 6.4.1 to 6.4.9 are furnished as per the records available in the college, and degree awarding university

अधिष्ठाता
कृषि महाविद्यालय,
इन्दौर (म. प्र.)

Signature of Dean with Date and Seal

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
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No. : 1721
Dated : 08/11/2024

CERTIFICATE

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Signature of the Dean of the college with Date & Seal

College of Agriculture
INDORE

(Annexure)

Agricultural Economics

Number of Publication by faculty

Sr. No.	Name of Faculty	Designation	Full Paper	Conference Symposium	Book	Book Chapters	Manual	Annual/Research Report
1	Harkesh Kumar Balai	Contractual teacher	5	Nil	nil	nil	nil	Nil

LIST OF PUBLICATIONS by faculty

1. Balai, H.K. and Bairwa, K.C.(2019). "Demonetization and its impact on Indian economy." *Readershelf.* **15**(4): 27-29.
2. Bairwa, K.C. and Balai, H.K. (2018). "Drought problrms: Divert to rural economy." *Readershelf*. **15**(3): 58-60.
3. Bairwa, K.C. and Balai, H.K. (2019). "Concept of Yield gap in Agriculture" *Readershelf*. **15**(11): 7-9.
4. Bairwa, K.C. and Balai, H.K. (2019). "Green Tax and its Regulation in India" *Readershelf*. **15**(11): 44-46.
5. Balai, H.K. and Bairwa, K.C. (2019). " Digital Payment/ Digital Indial", *Marumegh.* **4**(3): 83-85.

Course offered by the Department

SNo.	Title of the course		Credit
1.	Micro Economic theory and Application	AGECON 501	**2 (2+0)**
2.	Macro Economics and Policy	AGECON 502	**2 (2+0)**
3.	Evaluation of Economic thought	AGECON 503	**1 (1+0)**
4.	Agricultural Production Economics	AGECON 504	**2 (1+1)**
5.	Agricultural Marketing and Price Analysis	AGECON 505	**3 (2+1)**
6.	Research Methodology for Social Sciences	AGECON 506	**2 (1+1**
7.	Econometrics	AGECON 507	**2 (1+1)**
	Linear Programming	AGECON 508	**3(2+1)**
8.	Agricultural Finance and Project Management	AGECON 509	**3(2+1)**

Students Job placements

S.No	Name of Students	Batch	Govt. Job
1	Prabhuram Muchala	2016-17	Ranger (Guna, MP.)
2	Lakhan Permar	2016-17	NFL (Patna, Bihar)
3	Dilip Rajput	2016-17	Field Extension Officer
4	Mohan Alawa	2016-17	Patwari

Agricultural Extension and Communication

Number of Publication:

Faculty name	Designation	Full paper	Conference / Symposium	Books	Books chapter	Manual	Annual/ research reports
Dr. V. K. Swarnkar	Professor	--	--	--	--	--	--
Dr. M.M. Patel	Professor	--	--	--	--	--	--
Dr. Sandhya Chaudhary	Professor	16	nil	nil	nil	nil	Nil
Dr. A. Wankhede	Scientist	6	nil	nil	nil	nil	Nil
Dr. Deepak Verma	Contractual Teacher	21	12	nil	nil	2 (1 Published & 1 Send to Uni. for approval)	2 (RAWE Report)

List of Publications by Faculty:

1. Verma, D. K.., Singh, D. K., Yadav, R. N., Singh, Dan., Singh, H. L., Vivek., Sonkar, S. P., and Kumar, Sunil. (2016). Constraints of wheat growers in Central Uttar Pradesh. *Progressive Research.* **11** (4): 536-538.
2. Prasad, H. N., Singh, H .C., Singh, R. B., Sonkar, S. P., Singh, Brajendra, P., and Verma, D, K. (2016). Study of availability, utilization pattern and constraints perceived by the on-line communication users. *International Journal of Agriculture Sciences.* **8** (51): 2232-2235.
3. Verma, D. K., Singh, D. K., Kumar, Sunil., and Sonkar, S. P. (2017). Knowledge gap in transfer of wheat production technology Central Uttar Pradesh. *Progressive Agriculture.* **17** (1): 162-167.
4. Kumar, Sunil., Yadav, R. N., Singh, D. K., Singh, Dan., Verma, D. K., and Sonkar, S. P. (2017). To access the knowledge level and technological gap of cauliflower growers in Western Uttar Pradesh. *Progressive Agriculture.* **17** (1): 102-106.
5. Verma, D. K., Dohrey, R .K., N. S., Tiwari, Garima., Kumar, Manoj., and Pandey, K, Ravi. (2017). Adoption level of zinger growers regarding zinger cultivation practices. *International Journal of Current Microbiology and Applied Sciences.* **6** (2):1360-1365.
6. Kumar, Sunil., Verma, D. Kumar., Prasad, H, N., and Kumar, Avinash. (2017).The communication behaviour of the cauliflower growers in Western Uttar Pradesh. *Progressive Agriculture.* **17** (2): 292-296.
7. Verma, D. K., and Bharati, A. K. (2017). Knowledge of zinger production technology by the farmer of district Jhansi. *International Archive of Applied Sciences and Technology.* **8** (3): 37-42.

8. Verma, D. K., Kumar, Sunil., Singh, D. K., and Choudhary, Sandhya. (2018). Impact of Socio Economic Variables on Knowledge of Wheat Production Technology. *International Journal of Advances in Agricultural Science and Technology.* **5** (7): 191-201.
9. Baraskar, Mamta., Choudhary, Sandhya., Wankhede, Abhay., Jain, S. K., and Verma, D, K. (2018). Impact of Socio Personal Attributes of Vermicompost Production in Terms of Income and Employment Generation in Hoshangabad District (Madhya Pradesh*). SSRG International Journal of Agriculture & Environmental Science*. **5** (4): 34-36.
10. Chakravwarty, Poonam., Choudhary, Sandhya., Wankhede, Abhay., and Verma, D, K. (2018). Impact of Soil Health Card on Soybean Production Technology in Ujjain Block of Ujjain District, M.P. *International Journal of Advances in Agricultural Science and Technology.* **5** (8):122-130.
11. Sisodiya, Akansha., Choudhary, Sandhya., Verma, D, K., Kumar, K, S. (2018). Impact of Front-Line Demonstration (FLD's) on Adoption Behaviour of Pigeon Pea Growers in Barwani District of M.P. *International Journal of Innovative Science and Research Technology,***3** (9): 332-337.
12. Dhakad, Kamlesh., Wankhede, Abhay., Choudhary, Sandhya., and Verma, D, Kumar. (2018). Study on entrepreneurial behaviour of sugarcane growers in Guna District (M.P.) *International Journal of Advance Research, Ideas and Innovations in Technology.* **4** (5): 564- 566.
13. Kanasiya, Trilok., Pandey, Akanchha., Choudhary, Sandhya., and Verma, D, K. (2018).Constraints faced by the beneficiary farmers in obtaining the technological guidance through Kisan Mobile Advisory System in Khargone District (M.P.) *International Journal of Innovative Science and Research Technology.* **3** (11): 12-15.
14. Jain, Akashdeep., Wankhede, Abhay., Patel, Neerja., Choudhary, Sandhya., and Verma, D. K. (2019). Effectiveness of WhatsApp messages regarding improved agricultural production technology disseminated by KVK, Dewas (M.P.) *International Journal of Advances in Agricultural Science and Technology.***6** (3): 1-8.
15. Kumar, Prashant., Wankhede, Abhay., Choudhary, Sandhya., and Verma, D, K. (2019). A Stud on Scientific temperament of durum wheat growers under FLD conducted by IARI, regional station in Indore District of Madhya Pradesh. *International Journal of Recent Scientific Research.* **06** (A): 32719-32721.
16. Bhanvar, Sonila., Choudhary, Sandhya., Verma, D. K., and Wankhede, Abhay. (2019). Impact on sustainable rural livelihood of integrated watershed management program of beneficiary farmers in Khandwa District of Madhya Pradesh. *International Journal of Advances in Agricultural Science and Technology*. **6 (**10): 40-44.
17. Mulewa, Anand., Choudhary, Sandhya., Verma, D. K. (2020). Study of tomato producer's entrepreneurial behaviour under national horticulture mission (NHM) in Dhar District of Madhya Pradesh. *International Journal of Advances in Agricultural Science and Technology.* **7 (**4): 17-22.
18. Singh, Anil., Choudhary, Sandhya., Choudhary, S. K., and Verma, D, K. (2021). A Study on impact of NICRA (National Innovation of Climate Resilient Agriculture) project on adoption of recommended production technology of chickpea in Indore block, Indore district. *IOSR Journal of Agriculture and Veterinary Science.* **14** (2): 33-36*.*
19. Sharma, Pankaj., Choudhary, Sandhya., Choudhary, S. K., and Verma, D, K. (2021). A Study on identification of indigenous technology knowledge (ITK) and its utilization in contemporary modern agriculture at Shajapur District of Madhya Pradesh.

International Journal of Advances in Agricultural Science and Technology. **8** (2): 33-38.

20. Saiyam, Nikita., Verma, D, K., and Choudhary, Sandhya. (2021). A Study on job performance of anganwadi workers under ICDS scheme in Sehore District of Madhya Pradesh. *International Journal of Advances in Agricultural Science and Technology.* **8**(2): 49-54.
21. Dusre, Narsingh., Choudhary, Sandhya., Choudhary, S. K., and Verma, D, Kumar.(2021). A study of technological gap in cultivation of Bt-cotton under FLD through KVK Khargone (M.P.). *International Journal of Agriculture Extension and Social Development.* **4** (1): 106-108.

PG Courses Previous I Semester

S. No.	Title of the course	Credit	Class& semester
Major Courses			
1.	Development Perspectives of Extension Education (EXT- 501)	2 (1+1)	Previous yr 1st sem
2.	Development Communication and Information Management (EXT- 502)	3 (2+1)	Previous yr 1st sem
3.	Diffusion and Adoption of Innovations (EXT-503)	3 (2+1)	Previous yr 1st sem
4.	E- Extension (EXT- 505)	3 (2+1)	Previous yr 1st sem
Minor Courses			
5.	Evaluation of Economic Thought(AG ECON-503)	1(1+0)	Previous yr 1st sem
6.	Agricultural Production Economics (AG ECON-504)	2(1+1)	Previous yr 1st sem
Supporting Courses			
7.	Statistical Methods for Social Science	4(3+1)	Previous yr 1st sem
Compulsory Non Credit Courses			
8.	Library and Information services (PGS-501)	0+1	Previous yr 1st sem
9.	Technical writing and Communication skills(PGS-502)	0+1	Previous yr 1st sem
10.	Intellectual property and its management in Agriculture (PGS503-ecourse)	1+0	Previous yr 1st sem

PG Courses Previous II Semester

S. No.	Title of the course	Credit	Class& semester
Major Courses			
1	Research Methods in Behavioral Sciences (EXT- 504)	3(2+1)	Previous yr 2nd sem
2	Entrepreneurship Development and Management in Extension(EXT- 506)	3(2+1)	Previous yr 2nd sem
3	Human Resource Development(EXT- 507)	3(2+1)	Previous yr 2nd sem
Minor Courses			
4	Agriculture Marketing and Price Analysis(AG ECON- 505)	3(2+1)	Previous yr 2nd sem
5	Agriculture Finance Project Management (AG ECON 509)	3(2+1)	Previous yr 2nd sem
Supporting Courses			
6	Sampling Technique (STAT-513)	3(2+1)	Previous yr 2nd sem
Compulsory Non Credit Courses			
7	Basic concepts in Laboratory technology(PGS-504)	1(0+1)	Previous yr 2nd sem
8	Agricultural Research, Research ethics and rural development programmes(PGS505)	1(1+0)	Previous yr 2nd sem
9	Disaster management(PGS-506) (e-courses)	1 (1+0)	Previous yr 2nd sem

PG Courses Final Year III Semester

S. No.	Title of the course	Credit	Class& semester
1	Masters Seminar (EXT- 591)	0+1	Final Yr 3rd Sem
2	Masters Research (EXT-599)	10	Final Yr 3rd Sem

PG Courses Final Year IV Semester

S. No.	Title of the course	Credit	Class& semester
1	Masters Research (EXT-599)	10	Final Yr 4th Sem

Number of Students NET Clear

S. No	Name of Students	ID	Name of examination
1	Minakshi Meshram	123/2010	ASRB-NET (2016)

Agricultural Extension and Communication

Students' Placements

S. No	Name of Student	ID	Name and Place of Company/Institute
1	Bhupendra Yadav	18121004	Agriculture Field Officer (Union Bank of India)
2	Ankit Kurmi	19121001	Junior Technical Assistant (Cotton Corporation of India)

Faculty Awards (Academics) (2016-17 to 2020-21)

Dr. D. K. Verma (Contractual Teacher)	**1. Young Agriculture Scientist Award,** ICAABT (International Conference on Emerging Trends in Allied & Applied Biotechnology) from April 01-02, 2017 Orchha, (M.P). Organized by Biologix Research and Innovation Centre Pvt. Ltd. (BRICPL), India. **2. Young Extension Worker Award,** ICAAPS (International Conference on Advances in Agricultural & Applied Sciences for Promoting Food Security) from May 13-15, 2017 Kathmandu, (Nepal). Organized by Society for Agriculture Innovation and Development Ranchi (Jharkhand), India. **3. Excellence in Teaching Award,** 'National Conference on Doubling Farmers Income for Sustainable and Harmonious Agriculture' DISHA-2017, 9-10th September, 2017. Organized by Science & Tech Society for Integrated Rural Improvement (S&T SIRI), Thorrur, Warangal, (Telangana), India. **4. Scientist of the Year Award,** 2nd International Conference "Advances in Agricultural, Biological and Applied Sciences for Sustainable Future" (ABAS-2018) 20-22 October, 2018 Sardar Patel Auditorium, Swami Vivekanand Subharti University, Meerut (U.P.) India.

Agronomy

NUMBER OF PUBLICATIONS BY INDIVIDUALLY FACULTY

From year 2016-17 to 2020-21

Name	Designation	Specialization	Publications in number							
			Full paper	Abstract/ Paper in Conference/symposium	Books	Book chapters	Manual	Annul/ research reports	Bulletin	Article
Dr. M.P. Jain	HOD (Retired)	Agronomy	9	-	-	3	--	-	1	-
Dr. H.S. Thakur	Professor (Retired)	Agronomy	2	-	-	-	1	-	2	-
Mr. S. Mujalde	Scientist (Death)	Agronomy	6	-	-	2	1	-	-	8
Dr. A.K. Sharma	Principal Scientist (HOD)	Integrated farming System	14	1	1	-	-	3	-	-
Dr. N.S. Thakur	Professor	Crop Production	16	1	-	1	-	-	-	-
Dr. S.K. Choudhary	Principal Scientist	Dryland Agriculture & farming system	10	5	2	-	1	5	1	2
Dr. D.V. Bhagat	Senior Scientist	Dryland Agriculture	8	1	2	2	-	-	-	3
Dr. N.K. Kumawat	Scientist	Agronomy	44	5	2	8	1	-	8	14
Dr. N.K. Sinha	Senior Technical Officer	Cropping System	5	3	-	-	-	-	-	-
Dr. B.B. Kushwaha	Senior Technical Officer	Nutrient Management	3	1	-	-	-	-	-	-
Dr. O.P. Girothia	Senior Technical Officer	Agronomy	5	-	2	2	1	-	1	3
Dr. Jitendra Patidar	Contractual Teacher	Weed Science	-	4	-	1	-	-	-	1

Total Number of Publications by Faculty From Year 2016-17 To 2020-21

Publications	Total Number
Full paper	84
Conference/symposium	19
Books	5
Book chapters	15
Manual	2
Annual/Research Report	8
Bulletin	10
Article	27

LIST OF PUBLICATIONS BY FACULTY

A. SCIENTIFIC PAPERS PUBLISHED (2016-17 to 2020-21): 84

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- Jakhar R.K., Singh A.K. and Kumawat N. (2016). Yield attributes and yields of cucumber (*Cucumis stivus* L.) cultivars as influenced by growing conditions in arid zone of Rajasthan. *Environment and Ecology.* **34**(4C):2258-2261.
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B. ABSTRACT/EXTENDED SUMMARY PUBLISHED (2016-17 to 2020-21): 19

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H. TRAINING ATTENDED (2016-17 to 2020-21):17

Name of participant	Training
Dr. Narendra Kumawat	• Participated in 10 days ICAR sponsored short course on "Precision Conservation Agriculture for Climatic Change

	Adaption and Mitigation in Cereal System" Organized at ICAR-Indian Institute of Maize Research, Pusa Campus, New Delhi during 08-17 August, 2016. • Participation in 21 Days Winter School training on" Recent Advances in Micro-irrigation and Fertigation System for Improved Input Use Efficiency of Open and Covered Cultivation through Engineering Interventions" organized by Central Institute of Agricultural Engineering, Bhopal (MP) during January 3rd to January 23rd, 2019. • Participation in 5 days training programme on "Promotion of Organic Farming for Sustainable Agriculture" organized by Extension Education Institute, AAU, Anand (Gujarat) during August 19th to August 23rd, 2019. • Participation in 5 days training programme on "Advances in Utilization of Renewable Energy & Waste Management for Mitigating Climate Change" organized by Directorate of Extension Education, MPUAT, Udaipur (Rajasthan) during August 02nd Dec. to 6th Dec., 2019. • Participation in 5 days training programme on "Concept Development for Climate Change Project for State Government Officials" organized by Bankers Institute of Rural Development (BIRD), Lucknow during August 03rd Feb. to 7th Feb., 2020. • Participation in 21 Days Winter School training on "Application of sensor, instrumentation, artificial intelligence and Machine Learning in Precision Agriculture" organized by Central Institute of Agricultural Engineering, Bhopal (MP) during February 14th to March 05th, 2020.
Dr. B.B. Kushwaha	• Faculty Development Programme (FDP) in the field of entrepreneurship under department of Science and Technology ,Ministry of Science and Technology ,Government of India ,New Delhi organized by MPCON Ltd. at Indore and held at Christian Eminent College ,Indore during 29-1-18 to 12-2-18. • Attended sorghum field day and App of Agriculture training at IIMR, Hyderabad on 21 to 22 March 2018 • Attended 21 days training programme online refresher course on "Recent Advances in Millets Research" sponsored by "Society for Millets Research " and organized by ICAR-Indian Institute of Millets research ,Hyderabad during 10 – 31st December 2020.
Dr. N.S. Thakur	• Successfully Completed One Week Online Faculty Development Programme on "Online Teaching and Learning Practices held from 24th November to 02nd December, 2020 organized by IDP – NAHEP – RVSKVV – Gwalior, Madhya Pradesh.

Dr. Jitendra Patidar	• Attended 8 weeks online course of Integrated Pest Management by agMOOCS, IIT, Kanpur, 2020. • Attended 6 weeks online course of Employment Generation among Rural Youth through Agripreneurship by agMOOCS, IIT, Kanpur, 2020. • Attended 1 week online course of Online Faculty Development Programme on Introduction to data analysis using R (R Commander and R Studio) by Excellence Brings Success, New Delhi, 2020. • Attended 1 day online course of Online Faculty Development Programme on Making Interesting Graph using R Studio by Excellence Brings Success, New Delhi, 2020. • Attended 1 week online course of STTP on Data Analysis in R by REST Society for Research International (RSRI), Krishnagiri, Tamil Nadu, 2020. • Attended 3 week online training of Refresher Course on Statistical Tools and Techniques for Analysis of Agricultural Data by DHRM in Collaboration with Department of Mathematics & Statistics, CCS HAU, Hisar, 2020. • Attended 3 days online training programme of Advances in Weed Management organized by National Institute of Plant Health Management, Hyderabad, 2021.

I. CONFERENCES/WORKSHOPS/SEMINAR/SYMPOSIUM ATTENDED (2016-17 to 2020-21): 49

Name of Participant	Name of Conference/Seminar/'Symposium/Workshop
Dr. A.K. Sharma	• Participated in workshop on Universal human values held at RVSKVV, College of Agriculture, Indore during 8-10 December 2016 • Participated in Fourth International Agronomy Congress on "Agronomy for Sustainable Management of Natural Resources, Environment Energy and Livelihood Security to Achieve Zero Hunger Challenge" held at New Delhi during November 22-26, 2016
Dr. Narendra Kumawat	• Participation in National Conference in "Natural Resources Management in Arid and Semi-arid Ecosystem for Climate Resilient Agriculture and Rural Development" held during 17-19 February 2016 at SKRAU, Bikaner. • Participated in 10 days ICAR sponsored short course on "Precision Conservation Agriculture for Climatic Change Adaption and Mitigation in Cereal System" Organized at ICAR-Indian Institute of Maize Research, Pusa Campus, New Delhi during 08-17 August, 2016. • Participation in 3 days Capacity Building Training Programme on "Facilitating Entrepreneurship through Skill Development for Augmenting the Farm Family Income" organized by the Directorate of Extension Services, RVSKVV, Gwalior during November 17-19, 2017 at KVK, Jhabua. • Participation in Zonal Workshop cum Training under CFD on Oilseeds and Pulses Organized by ICAR-Agricultural Technology Application Research Institute, Zone-IX, Jabalpur at KVK, Jhabua during January 18-20, 2018. • Participated in the Capacity Building Training Programme on "Integrated Farming System Concept, Models and approaches for Enhancing Farmer's Income" Organized by Directorate of Extension Services, RVSKVV, Gwalior during March 20-21, 2018 at KVK, Datia (MP). • Participation in 3 days training programme on "Developing Winning Research Project in Agricultural Research" Organized by NAARM, Hyderabad during September 25-27, 2018 at RVSKVV, Gwalior (MP). • Participation in 21 Days Winter School training on" Recent Advances in Micro-irrigation and Fertigation System for Improved Input Use Efficiency of Open and Covered Cultivation through Engineering Interventions" organized by Central Institute of Agricultural Engineering, Bhopal (MP) during January 3rd to January 23rd, 2019. • Participation in 5 days training programme on "Promotion of Organic Farming for Sustainable Agriculture" organized by

	Extension Education Institute, AAU, Anand (Gujarat) during August 19th to August 23rd, 2019. • Participation in 5 days training programme on "Advances in Utilization of Renewable Energy & Waste Management for Mitigating Climate Change" organized by Directorate of Extension Education, MPUAT, Udaipur (Rajasthan) during August 02nd Dec. to 6th Dec., 2019. • Participation in 5 days training programme on "Concept Development for Climate Change Project for State Government Officials" organized by Bankers Institute of Rural Development (BIRD), Lucknow during August 03rd Feb. to 7th Feb., 2020. • Participation in 21 Days Winter School training on "Application of sensor, instrumentation, artificial intelligence and Machine Learning in Precision Agriculture" organized by Central Institute of Agricultural Engineering, Bhopal (MP) during February 14th to March 05th, 2020. • Participated in one day National webinar on "Arming for Greater Success" organized by A.S. Patil College of Commerce (Autonomous), Vijyapur on 7th May 2020. • Participated in one day National webinar on "Natural Resource and Their Management Strategies in Post Corona Period- Global and National Challenges" Organized by Department of Mechanical and Civil Engineering, Sri Aurobindo Institute of Technology, Indore on 8th May 2020. • Participated in two day National webinar on "Approaches Towards Development of Rural and Agriculture Sector in the Present Scenario" organized by JNKVV, College, Tikamgarh (MP) on 8 & 9th May 2020. • Participated in one day National Seminar on "Food Adulteration" organized by Department of Science, Comp-Feeders Aisect College of Professional Studies, CAT Rau Road, Indore on 15th May 2020. • Participated in one day National webinar on "Career Opportunities in Agriculture: An Interaction Session for Agri-Gradutes" organized NAHEP, RVSKVV, Gwalior on 28th May 2020. • Participated in 3 days National online workshop on "Nutrient Management Options for Boosting Organic Agriculture: organized by Mata Gujri College, Fatehgarh Sahib, Patiala on 28-30th May 2020 • Participation in online National Webinar on "organic Farming: A sustainable way of Ensuring Livelihood Security and Meeting Global Demands" organized by Banda University of Agriculture and Technology, Banda (U.P.) on 5 & 6 June 2020. • Participation in online National Webinar on "Integrated Farming System Approach for Entrepreneurship

	Development during COVID19 Pandemic" organized by SKRAU, Bikaner on 23-24th June 2020. • Participation in online National Webinar on "Kadaknath Farming Present Status to Future Prospect" organized by KVK, Jhabua (RVSKVV) on 9th July 2020. • Attended and actively participated in one day national Webinar on "On Farm Skill Development Through Soil and Water Conservation Technologies: A Buffer Against Production Risk in the Face of Climate" organized by RVSKVV, Gwalior on 25th July 2020. • Participation in 7 days training programme on "Online Teaching & Learning Practices" organized by NAHEP, RVSKVV, Gwalior during August 24rd November to 2nd December, 2020.
Mr. A.L. Kushwaha	• Participated in Annual group meeting of Safflower at Professor Jayashankar Telangana State Agricultural University, Rajendranagar, Hyderabad, from 17-19 August 2017. • Attended the QRT meeting of Oilseed group of centre zone at College of Agriculture, Indore in May 6-8, 2018. • Participated actively in Annual group meeting of Safflower held at Birsa Agricultural University, Kanke, Ranchi (Jharkhand) in August 10-12, 2018. • Participated actively in Annual group meeting of Safflower held at CSAU&T, Kanpur, (UP) in September 4-6, 2019
Dr. B.B. Kushwaha	• Attended 45th Annual Group Meeting of Sorghum organized at UAS, Raichur, from 27-29th April, 2015. • Attended the Quinquennial review Team meeting at College of Agriculture, Indore held on 28th – 30th Aug 2018. Attended workshop on siksha me sarvebhom manviya mulya" from 8-10 Dec. 2016 at College of Agriculture, Indore. • V.P.Kataria, Usha Saxena, G.K. Nema and B.B. Kushwaha attended 47 th Annual Group Meeting of Sorghum organized at GKVK, UAS, Bangalore from 22-24th April, 2017. • Attended two days workshop on soft skill development for attaining professional excellence " at 7-8th Feb 2017 on CoA, Indore • Attended Workshop on swachha Bharat Programme at CoA, on 17th Jan. 2017. • Attended Workshop on swachha Bharat Programme at CoA, on 17th Jan. 2017 • Attended workshop on siksha me sarvebhom manviya mulya" April 2017 at College of Agriculture, Indore Attended

	48 th Annual Group Meeting of Sorghum organized at MPKV, Rahuri from 21-23rdApril, 2018. • Attended 50th Annual Group Meeting of Sorghum organized by IIMR by zoom meeting from 20-5-2020 and 21-5-2020. • Attended Seminar on Oil seed (Safflower and Linseed) held from 27-8-15 to 30-8-15 . • Attended and actively participated in one day National webinar on SOIL HEALTH –Role of Microorganisms and soil organic matter under NAHEP-IDP on 6yh July 2020.
Dr. N.S. Thakur	• Participated in Fourth International Agronomy Congress on "Agronomy for Sustainable Management of Natural Resources, Environment Energy and Livelihood Security to Achieve Zero Hunger Challenge" held at New Delhi during November 22-26, 2016 and presented the research paper on "Integrated nutrient management in Kharif sorghum [*Sorghum bicolor (*L.) Moench]" in poster session. • Participated in National Webinar on "Rehabilitation of Non-agriculture Migrant Labourers due to COVID-19 Pandemic: Challenges and Opportunities" organized by Directorate of Extension Services - RVSKVV, Gwalior (MP) on June 19, 2020. • Attended and actively participated in one day National Webinar on SOIL HEALTH – Role of Microorganisms and Soil Organic Matter under NAHEP – IDP on 6th July, 2020 organized by IDP – NAHEP – RVSKVV - Gwalior and RAK College of Agriculture, Sehore. • Attended and actively participated in one day National Webinar on On-Farm Skill Development Through Soil and Water Conservation Technologies: A Buffer Against Production Risk in the Face of Climate under NAHEP – IDP on 25th July, 2020 organized by IDP – NAHEP – RVSKVV–Gwalior, Madhya Pradesh. • Participated in National Webinar on "Hi-Tech intervention for agriculture development and catalyzing Agri Start-up" organized by IDP – NAHEP – RVSKVV, Gwalior, College of Agriculture, Indore and RVSKVV-Krishi Vigyan Kendra, Dhar (M.P) on 17 August, 2020. • Participated in the IDP-NAHEP sponsored National Webinar on "Digital Soil Science: Opportunities and Challenges" on 12thApril 2021 organized by Department of Soil Science and Agricultural Chemistry, Rajasthan College of Agriculture, Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan.

	• Participated Annual Group Meeting on Safflower and Linseed held at College of Agriculture, Indore from 27 th to 29 th August 2015. • Participated in work shop on Universal Human Values" during December, 8-10, 2016 held at R.V.S. Krishi Vishwa Vidyalaya, College of Agriculture, Indore. (M.P.) • Participated in Sensitization Work shop on National Agricultural Higher Education Project (NAHEP) Component 2 Activities during February, 13-14, 2020 held at R.V.S. Krishi Vishwa Vidyalaya, Gwalior (M.P.)
Dr. Jitendra Patidar	• Participated in ISWS Biennial Conference on Weed Management for Enhancing Farmers' Income and Food Security at ICAR –CCARI, Goa, 2020. • Participated in 35th M.P. Young Scientist Congress by MPCST at SGSITS, Indore, 2020.

J. PARTICIPATED IN EXTENSION ACTIVITIES (2016-17 to 2020-21): 17

Name	Activities/Remark
Dr. A.K. Sharma	• Celebrated and participated in 150th birth anniversary of Mahatma Gandhi 2018-19 for tree plantation and conducted different activities like discussion session, essay competition, drawing and painting competition and nukkad natak. • Participated in world soil day, 5 December 2018 as a guest. • Participated in Video Conferencing of meeting about *kharif* 2020 and preparation of Rabi 2021. • Organized Organic Krishi Mela- 2020-21 • Attended Research Review Meeting 2019, 2020, 2021 • Radio talk on Fodder Crop in April, 2017 • Radio talk on Rabi Pulse in October, 2018 • Radio Talk on Integrated Farming System in January, 2020 • Radio Talk on Summer Moong February, 2021
Dr. S.K. Choudhary	• Radio talk on xzh"edkyhueDdk dh ns[kHkky ¼izlkj.k 13-05-2018 vkdk'kok.kh] bUnkSj½ • Radio talk on xzh"edkyhuQlyksaesa ty izca/ku¼izlkj.k 14-05-2018 vkdk'kok.kh] bUnkSj½ • Radio talk on Lizdyj ,oafMªiflapkbZdkegRo ¼izlkj.k 14-05-2018 vkdk'kok.kh] bUnkSj½ • Radio talk on Fkzs'kjijdk;Zdjrs le; lko/kkfu;kW ¼izlkj.k 18-03-2019 vkdk'kok.kh] bUnkSj½
Dr. N. S. Thakur	• Radio talk delivered on Importance and Methods of Drainage on dated 26.08.2019 organized by Akashvani Indore • Radio talk delivered on package of practices of Wheat and Gram on dated 13.01.2020 organized by Akashvani Indore
Dr. A.L. Kushwaha	• Radio talk (*kheti grahasthi*) on Irrigation management in Rabi crops, recording Date-2.11.2018, broadcasting date- 9-11-2018, Time-7.21pm at AIR, Indore

	• Participated in state level safflower variety (RVSAF-14-1) release committee at Vallabh Bhavan Bhopal on 25-9-2019.

LIST OF STUDENTS' PUBLICATIONS (in bibliographical form) (2016-17 to 2020-21)

A. SCIENTIFIC PAPER PUBLISHED: 3

- Sahu Jyotimala and Thakur N.S. 2016. Response of Date of Sowing on Yield And Yield attributes of Safflower Cultivars. *The Bioscan* 11(1): 503-507. (Jrn ID T017, ISSN 0973-7049, NAAS Rating-5.26).
- Aakash, Lalita Bhayal, N.S. Thakur, Sudheer Kumar Kirar and S.K. Choudhary. 2019. Energetics of maize production system as influenced by varieties and nitrogen scheduling. *Journal of Experimetal Biology and Agricultural Sciences.* 7(5): 462-467. (NAAS Rating 5.07 and ISSN No. 2320 – 8694)
- Rahangdale N., Kumawat N., Jadav M.L., Singh M. and Bhagat D.V. (2021). Effect of liquid bioinoculants and straw mulch on health of vertisols and productivity of soybean (*Glycine max*). *Crop Research*, 56 (3&4): 111-117, DOI : 10.31830/2454-1761.2021.018

COURSES OFFERED BY THE DEPARTMENT

S. No.	Title of the Course	Course No.	Total Credits
	Major Courses		
1	Modern Concepts in Crop Production	AGRON 501	3(3+0)
2	Soil Fertility and Nutrient Management	AGRON 502	3(2+1)
3	Principles and Practices of Weed Management	AGRON 503	3(2+1)
4	Principles and Practices of Water Management	AGRON 504	3(2+1)
5	Cropping System and Sustainable Agriculture	AGRON 511	2(2+0)
6	Dryland Farming and Watershed Management	AGRON 512	3(2+1)
7	Principles and Practices of Organic Farming	AGRON 513	3(2+1)
8	Master's Seminar	AGRON 591	1(0+1)
9	Master's Research	AGRON 599	20(0 + 20)
	Minor Courses		
10	Soil, Water and Air Pollution	SOIL 501	3(2+1)
11	Soil Fertility and Fertilizer Use	SOIL 502	4(3+1)
12	Soil Biology and Biochemistry	SOIL 506	3(2+1)
13	Remote Sensing and GIS Technique for Soil and Crop Study	SOIL 510	3(2+1)

STUDENTS QUALIFIED NET/SRF/COMPETATIVE EXAMS

S. No	Name of Students	ID	Name of examination
1	Arpita Dodiyar	15202	Assistant Quality Controller
2	Alka Rajoria	11542	ASRB-NET, FEO

3	Jitendra Sinh Jaiswal	15204	ASRB-NET
4	Sanjay Waskle	6385	AFO
5	Raju Gurjar	15207	RHEO
6	Shyam Yaduwanshi	16121107	NSC
7	Aakash	17121101	ICAR SRF, BHU RET, ASRB-NET
8	Sonu Yadav	18121101	Agriculture officer
9	Nikita Rathore	18121107	Agriculture officer
10	Shyam Patidar	18121110	Section Officer horticulture

STUDENTS PLACEMRNTS/JOBS

Name of Student	**ID**	**Name and Place of Company/Institute**
Arpita Dodiyar	15202	Assistant Quality controller at Neemuch from 2018
Bheem Singh Raghuwanshi	15203	Rallis India Limited, Indore, 2018
Jitendra Singh Jaiswal	15204	RHEO Rajgarh 2017
Sanjay waskle	6385	Central bank of India
Rajnarayan Singh Chouhan	17121106	Development officer at Biostadt india limited
Vijay Jamodkar	17121107	Raccalto India pvt Ltd Jalgaon MH from 2019
Bharat Dudwe	17121103	Coaching provide ,Khalghat
Shyam Yaduwanshi	16121107	Senior trainee, Nsc jalgaon
Nidhi Rai	17121105	Own mushroom farm set up at chhindwara in 2019 for training to other farmer
Sonu Yadav	18121101	Agriculture officer in Bank of India
Nikita Rathore	18121107	Agriculture officer in UCo Bank
Shyam Patidar	18121110	Agriculture officer in Bank of India

STUDENT'S AWARDS (ACADEMICS) (2016-17 to 2020-21):

- Awarded with **"best presentation award"** (Oral) in the **1st Students Agricultural Research Conference (SARC) "Cotyledon - 2019"** organized by RVSKVV.
- Awarded with **"best poster presentation award"** in the **"International Conference on Sustainable Agricultural Development in Changing Global Scenario"** held on 11-13 October 2019 at Banaras Hindu University, Varanasi.
- Awarded with **"best poster presentation award"** in the **"5th Uttar Pradesh Agricultural Science Congress - Enhancing Farmer's Income and Water Conservation: Opportunity and Challenges"** held on 22-24 February 2020.
- Awarded with **"Consolation Prize award"** in the **National Essay Writing Competition** on the subject **"Agricultural Waste to Wealth"** in Hindi category-

III of University students (post graduate and research scholars) organized by the **Ministry of Agriculture and Farmers Welfare, Government of India**.

- Awarded with **"Lt. G. R. Gokhale Memorial Cash Prize 2018-19 award**" for obtaining the **highest OGPA in the first attempt in the Post Graduation degree programme of the batch 2017-2018** in college.
- Awarded with **"Paramount Award 2018 Agronomy"** for the Topmost Performance in Master's Degree Course of Agriculture sponsored by Mr. Anil Ajmera, Alumni Association, College of Agriculture, Indore (M.P.).

FACULTY'S AWARDS/HONOURS (ACADEMICS) (2016-17 to 2020-21):

S.N.	Name of Faculties	Awards/Achievements/Certificates
1.	Dr. N.S. Thakur	• Received **Reviewer Excellence Award** for Legume Research Journal • **Certificate of appreciation** for Collaborative work in the Development of Sorghum Variety RVJ 1862
2.	Dr. Narendra Kumawat	• **Young Scientist Award 2017** • Awarded for **excellent contribution** to Current Agriculture Research Journal as **Reviewer** • Awarded Certificate of **Excellence in Reviewing** for "**Asian Journal of Agricultural Economics and Sociology**" 2019. • Awarded Certificate of **Excellence in Reviewing** for "**Journal of Experimental Agriculture International**" 2019. • **Young Agronomist Award 2020**
3.	Mr. A.L. Kushwaha	• **Certificate of appreciation** for outstanding accomplishments in collaborative work in the development of safflower variety RVSAF 14-1 and RVK 67 • Associated in evaluation of **new cotton variety (at National Level) RVK 11(Raj Vijay Kapas 11)**
4.	Dr. B.B. Kushwaha	• **Certificate of appreciation** for collaborative work in the development of Sorghum variety RVJ 1862
5.	Dr. Jitendra Patidar	• Awarded **Fellowship for training of Young Scientist** by M.P. Council of Science and Technology • Awarded **Best Article Award** by Agriculture & Food: e-Newsletter for article entitled "Cultivation Technique of Quinoa" published in Agriculture & Food: e-Newsletter during March 13th, 2021

FEEDBACK BY STUDENTS

Number of Students is given their level of experience by putting a tick mark against the statement from a score 1 to 5 in Feedback Performa. Note: A higher score indicates a better experience.

Statement	Level of Experience given by the number of Students				
	Below Average	Average	Good	Very Good	Excellent
Extent of Syllabus Covered in the Class	0	0	5	3	4
Use of Teaching Aids and ICT in the Class to Facilitate Teaching	2	1	1	1	7
Integration of Theory and Practical in Classes	1	1	2	6	2
Experience with Research Environment	0	3	1	5	2
Classroom Facilities	0	5	2	1	5
Overall Academic Experience	1	3	4	1	0

Entomology

Number of Publication

Name	Designation	Specialization	Publications in number					
			Full paper	Trainings attended	Books	Book chapters	Manual	Annul/ research reports
Dr. S.N. Upadhyaya	Professor	Entomology	**-**	**-**	**2**	**1**	**1**	**-**
Dr. M. Sharma	Associate Professor	Entomology	**-**	**-**	**-**	**-**	**-**	**-**
Dr. S.B. Singh	Assistant professor	Entomology	**4**	**-**	**2**	**1**	**1**	**-**
Dr. R.K. Choudhary	Professor & HoS	Entomology	**3**	**1**	**1**	**-**	**1**	**-**
Dr. A.K. Badaya	Professor	Entomology	**1**	**1**	**1**	**-**	**2**	**-**
Dr. Neelesh Raypuriya	Contractual Teacher	Entomology	**3**	**2**	**-**	**-**	**1**	**-**

List of publications by faculty:

- **Raypuriya Neelesh, Choudhary R.K., Swathi P. and Prajapati Sunil. (2017). Influence of Method and Application Time of Nitrogen on Pest Incidence of Sorghum, *Sorghum bicolor* (L.) Moench Genotypes.** *International Journal of Bio-resource and Stress Management*, 8(3):413-417.
- Sharma, Neha, Upadhyay, S.N., Bhadauria, N.S. and Singh, S.B. (2018). Ecofriendly management of mustard aphid, *Lipaphis erysimi*. *Multilogic in Science* (International), (7):111-114.

- Sharma, Neha, Upadhyay, S.N., Bhadauria, N.S. Singh, S.B. and Sharma, Janmejaya. (2017). Screening of mustard genotypes against mustard aphid in protected and unprotected conditions. *Progressive Research-An International Journal*, 12 (3): 2207-2211.
- Singh, S.B., Chundavat, G.S., Badaya, A.K. and Upadhyay S.N. (2018). Assessment of losses due to various insect pests in bt cotton hybrids in Malwa region of Madhya Pradesh. *Annals of plant and soil Res.,* 20(4): 354-358.
- Singh, S.B., Upadhyay, S.N. and Choudhary, R.K. (2016). Assessment of insecticidal alternation against onion thrips (*Thrips tabaci* Lindeman) in Malwa region, Madhya Pradesh. *Annals of Plant and Soil Research*, 16 (1): 29-32.
- Swathi P., Choudhary R.K. and Raypuriya Neelesh. (2016). Performance of sorghum (Gird) germplasm for resistance to stem borer. *Annals of Plant and Soil Research*, 18(2):165-167.
- Swathi P., Swathi B., Das S.B., Sridhar V., Giribabu O., Snehalatha G. and Raypuriya Neelesh. (2017). First report of South American tomato leaf miner, *Tuta absoluta* (Meyrick) from Madhya Pradesh, India. *Pest Management in Horticultural Ecosystems*, 23(1):92-93.

Books:

- Singh, S.B., Upadhyay, S.N. and Choudhary, R.K. (2017). Non Insect pests and Their Management. Bio tech Books, New Delhi, ISBN 978-81-7622-402-4. Pages from 01-218.
- Dr. S.B. Singh, Dr. A.K Badaya and Dr. S.N. Upadhayay (2019). Toxicology of insecticides authored by for PG Entomology published by BIOTECH BOOKS, (ISBN: 978-81-7622-459-8).

Chapters in books

- S.N. Upadhyay and S.B. Singh (2017). Integrated Pest management in Rabi Crops. Chapter 19. Book-Production Technology of Rabi Crops by Suresh Singh Tomar, Yagya Dev Mishra and Shailendra Singh Kushwah.

Manual published:

- A.K. Badaya, Neelesh Raypuriya and R.K. Choudhary (2021). Management of important beneficial insects, publication no.: RVSKVV/115/2021.
- A.K Badaya, S.N. Upadhyay and S.B. Singh (2018). Toxicology of Insecticides, publication no. RVSKVV/87/2018.

Trainings attended:

- Dr. A.K. Badaya attended seven days training at GAU, Junagarh on Eco-friendly management of insect pests for sustainable agriculture from 17-23 January, 2018
- Dr. R.K. Choudhary attended seven days training at GAU, Junagarh on Honey bee sustainable agriculture from 5-11 February, 2018.
- Dr S.B. Singh participated in Winter School entitled "Insect resistance to Bt toxins and Insecticides in cotton" Organized by CICR, Nagpur under ICAR from 18th January, 2018 to 07th February, 2018.
- Neelesh Raypuriya participated in Refresher Course on Statistical Tools and Techniques for Analysis of Agriculture Data organized by Academy of Agriculture Research and Education Management, Directorate of Human Resource Management at CCSHAU, Hisar, Haryana, 8 – 28 July, 2020.
- Neelesh Raypuriya participated in four days training on Climate Smart Technologies and Practices forIncreasing the Soybean Productivity organized by

National Institute of Agricultural Extension Management, Hyderabad (Telangana) at ICAR - IISR, Indore, 18 - 21 May, 2021.

	Post Graduate M. Sc. (Agri.) Entomology			
S. No.	**Course**	**Code**	**Credit**	**Semester**
1	**Major**-Insect Morphology	ENT 501	1+1	I
2	**Major-**Classification of Insects	ENT 504	2+1	I
3	**Major-**Principles of Integrated Pest Management	ENT 510	1+1	I
4	**Major-** Techniques in Plant Protection	ENT 518	0+1	I
5	**Minor**- Detection and Diagnosis of Plant Diseases	Pl. Path. 505	0+2	I
6	**Minor**- Disease Resistance in Plant Disease	Pl. Path. 513	2+0	I
7	**Major-** Insect Anatomy, Physiology and Nutrition	ENT 502	2+1	II
8	**Major-** Insect Ecology	ENT 505	1+1	II
9	**Major-** Biological Control of Crop Pests and Weeds	ENT 507	1+1	II
10	**Major-** Toxicology of Insecticides	ENT 508	2+1	II
11	**Major**-Pests of Field Crops	ENT 511	1+1	II
12	**Minor**- Plant Bacteriology	Pl. Path. 503	2+1	II
13	**Minor**- Integrated Disease Management	Pl. Path. 516	2+1	II
14	Master's Seminar	ENT 591	0+1	III
15	Master's Research	ENT 599	0+10	III
16	Master's Research	ENT 599	0+10	IV

Number of students qualified exams:

Name of Students	**ID**	**Name of examination**
Ms. Shivani Suman	18121911	ASRB-NET

Student's placement

Name of Student	**ID**	**Name and Place of Institute**
Mr. Ankit kale	19121901	Agriculture field officer at central govt.

Student's Awards (Academics) (2016-17 to 2020-21)

Name of Student	**ID**	**Award**
Mr. Ankit kale	19121901	Received merit award at College level.

Genetics & Plant Breeding

Number of Publication

Faculty name	Designation	Full paper	Conference / Symposium	Books	Books chapter	Manual	Annual/ research reports
Dr. Indu Swarup	Principal Scientist	6	nil	6	nil	nil	20
Dr. S. Holkar	Senior Technical Officer	nil	nil	nil	nil	nil	12
Dr. M.K. Saxena	Scientist	3	nil	nil	nil	nil	5
Dr. Usha Saxena	Senior Technical Officer	3	nil	nil	nil	nil	5

Annexure II: List of Publication

Ranade, D.H., Mujalde Santosh, and Swarup, Indu. (2017). Evaluation of in-situ Moisture Conservation Practices and Assessment of Improved Seeding Implements to Mitigate Dry Spells. *Indian J. Dryland Agricultural. Research & Development.* **32** (2): 76-82.

Ranade, D.H., Mujalde Santosh, and Swarup, Indu (2018). Modified traditional water harvesting system for irrigation. *Indian J. Dryland Agricultural. Research & Development.* **33** (2): 86-88.

Nitesh Kumar Panwar, Indu Swarup, Lokesh Gour and Mayank, Jain. (2019). Assessment of genetic variation and divergence in black gram's genotypes on climatic condition of Madhya Pradesh. *Journal of Pharmacognosy and Phyto-chemistry*. **8**(2): 986-991.

Ranade, D.H., Jadav, M.L., Swarup, Indu, Upadhyaya A., Bhagat, D.V. and Girothia, O.P. (2019). Innovative and modified ridge –furrow irrigation system in malwa region. *Int. J. Agril. Sciences*. **11**(15):8880-8889.

Ranade, D.H., M.L Jadav, Indu, Swarup, O.P., Girothia, D.V., Bhagat, and Ashish, Upadhyaya, (2020). Crop Productivity Enhancement Soybean Based Cropping Systein Water in Malwa Region*. Legume Research- An Internal Journal*, 10.18805/A - 5447: 01-05

Ranade, D.H., M.L. Jadav, Indu Swarup, O.P. Girothia, D.V. Bhagat and A., Upadhyaya. (2021). Crop Productivity Enhancement under Soybean Based Cropping System through Harvested Rain Water in Malwa Region. Paper accepted for publication by Agricultural Research Communication Centre dated 22.03.2021.

Books

Ranade, D.H.; Mujalde, S. and Indu Swarup, Bhagat, D.V. and Girothia, O.P. (2019). *Shushka kheti vagyanik padhdhati*. Publisher Biotech books, New Delhi, ISBN No. 978-81-7622-441-3.

Ranade, D.H.; Mujalde, S. and Indu Swarup, Bhagat, D.V. and Girothia, O.P. (2019). Natural resource management in dryland agriculture. Publisher Biotech books, New Delhi, ISBN No. 978-81-7622-442-0.

Ranade D.H., Mujalde Santosh, Swarup Indu, Singh Akhilesh, Bhagat, D.V. and Girothia, O.P. (2019). *Shushka kheti ki vagyanik padhdhati.* Publisher Biotech books, New Delhi ISBN no. 978-81-7622-441-3.

Ranade D.H., Mujalde Santosh, Swarup Indu, Bhagat, D.V. and Girothia, O.P. (2019). Natural resource management in dryland agriculture. Publisher Biotech books, New Delhi ISBN no. 978-81-7622-442-0.

Ranade D.H., Jadav, M.L., Swarup Indu, Girothia, O.P., Bhagat, D.V., Singh Akhilesh and Choudhary Sharad (2020). Rainwater management in rainfed areas. Publisher Biotech books, New Delhi ISBN no. 978-81-7622-458-1.

Ranade D.H., Jadav, M.L., Swarup Indu, Girothia, O.P., Bhagat, D.V., Choudhary, S.K. and Upadhyaya, Ashish (2020). *Apvahit versha jal akatrikaran v sanchit jal ka upyog*. Publisher Biotech books, New Delhi ISBN No. 978-81-7622-464-2.

Popular Article

Ranade, D.H.; Mujalde, S. and Indu Swarup (2018). Innovative and efficient water management practices through valve system in pipeline*. Indian Farming.* **68***(2).*

Ranade, D.H.; Mujalde, S. and Indu Swarup (2017). *Sichai Ki Paramparik vidhi Ka Adhunikaran.* Kheti. 21-23.

Ranade, D.H.; Mujalde, S. and Indu Swarup. (2017) 'Natural resource management for tackling dual problems of water logging and irrigation water scarcity. *Indian Farming* **67**(6); 45-49.

Ranade, D.H.; Mujalde, S. and Indu Swarup. (2017). *Jal Jamov Va Sichai Jal Ki Kami Ka Kushal Prabandhan. Kheti (September) 19-21.*

Ranade, D.H.; Mujalde, S. and Indu Swarup (2018). Innovative and efficient water management practices through valve system in pipeline*. Indian Farming.* **68** *(2): 17-20*

Ranade, D.H.; Mujalde, S., Girothia, O.P., Swarup, Indu and Bhagat, D.V. (2018). *Samanvit Krishi pranali se sambhav hai bharpur kamai. Kheti* (June) 29-31.

Ranade, D.H.; Mujalde, S. and Indu Swarup. (2018). Pattidar Sichai hetu jal prabandhanavum jal bachat pranali. *Kheti* (November). 30-33.

Ranade D.H. and Jadav M.L. (2019). *Navin va sasti sinchai padhatiyan. Kheti* (February): 17-19.

Ranade D.H., Swarup Indu, Girothia, O.P., Bhagat, D.V. and Upadhyay Asheesh. (2019). *Khet talab se aayi jeevan me hariyali. Kheti* (May): 39-41.

Ranade D.H., Jadav, M.L., Girothia, O.P. and Bhagat, D.V. (2019). *Jal sangrahan talabo se samekit kheti*. Kheti (July): 17-19.

Ranade D.H., Jadav, M.L., Swarup Indu, Bhagat, D.V. and Girothia, O.P. (2019). Effectiveness and utility of percolation tanks in Malwa and Nimar region. *Indian farming* **69**(07): 25-27.

Ranade, D.H., Jadav, M.L., Swarup, Indu, Upadhyaya A., Bhagat, D.V. and Girothia, O.P. (2019). Enhancing crop productivity through water harvesting tank under changing climatic conditions. *Int. J. Agril. Sciences.* **11**(16): 8885-8887.

Ranade, D. H., Jadav, M.L., Swarup, Indu, Bhagat, D.V. and Girothia, O.P. (2019). Innovative and modified ridge –furrow irrigation system in malwa region. *Indian Farming* **69**(7): 25-27.

Ranade D.H., Jadav, M.L., Swarup Indu, and Bhagat, D.V. (2020). Long term utility and Sustainable effect of soil and water conservation measures *Indian Farming.* **70** (10): 31-33.

Courses offered by the Department

S. No.	Title of the course	Course No	Total Credits
Major Courses			
1	Principles of Genetics	GP 501	3 (2+1)

2	Principles of Cytogenetic	GP 502	3 (2+1)
3	Principles of Plant Breeding	GP 503	3 (2+1)
4	Cell Biology and molecular Genetics	GP 503	3 (2+1)
5	Principles of Quantitative Genetics	GP 504	3 (2+1)
6	Biotechnology for crop Improvement	GP 509	3 (2+1)
7	Maintenance Breeding and Concept of Variety release and Seed Production	GP 515	2 (1+1)
Minor Courses			
1	Detection and Diagnosis of Plant Diseases	Pl Path 505	2 (0+2)
2	Disease resistance in plant	Pl Path 513	2 (2+0)
3	Pest of Field Crops	ENT 511	2 (1+1)
4	Integrated Disease Management	Pl Path 516	3 (2+1)

Students' Placements

Name of Student	**ID**	**Name and Place of Company/Institute**
Deepak Nagar	181216604	Specialist Officer, Bank of India
Shweta Kushwah	18121612	Specialist Officer, Bank of India
Mayank Jain	152G04	IARI, Regional Research Station Wheat, Indore
Nitesh Pawar	152G04	Complete Ph.D. (Plant Breeding), SRF, Project Coordinator (Sesame and Niger), JNKVV, Jabalpur

Faculty and Student's Awards (Academics) (2016-17 to 2020-21)

Name of award/distinction	**Name of faculty/student**	**Work for which award/conferred**
Certificate of Appreciation	Dr. Usha, Saxena	Development of Sorghum Variety *i.e.,* RVJ 1862
Certificate of Appreciation	Dr. M.K. Saxena	Development of Safflower Varieties *i.e.,* RVS-113, RVSAF-114-1; Lentil varieties *i.e.,*RVL 13-5, RVL 13-7; Pigeonpea Variety, RVICPH-2671 (Hybrid).
Certificate of Appreciation	Dr. Sunil Holkar	Development of Cotton Varieties *i.e.*, RVK 67and RVK 11.

Plant Pathology

Number of Publication

Name of the Department	Faculty name	Designation	Full paper	Conference/ Symposium	Books	Books chapter	Manual	Annual/ research reports
Plant Pathology	Dr. R.K. Singh	Scientist	10	5	4	2	2	Nil

List of Publication

Birla, M., Singh, R. K. and Neha, B. (2020). Validation of detection techniques and Management of Seed Borne diseases of chilli (*Capsicum annum*). *Journal of Pharmacognosy and Phytochemistry.* **9***(*6):168-171.

Parveen, G. A., Singh, R. K., Kaushik, S., Krishna, A., Wada, T. and Noda, H. (2017). Detection of symbionts and virus in the whitefly *Bemisia tabaci* (Hemiptera: Aleyrodidae), vector of the *Mungbean Yellow Mosaic India Virus* in central India. *Applied Journal Entomology and Zoo*logy. **52** (4): 567-579.

Srivastava, A. K., Saxena, D. R., Saabale, P. R., Raghuvanshi, K. S., Anandani, V. P., Singh, R. K., Sharma, O.P., Wasiniker, A. R., Sahni, Sangita, Varshney, R. K., Singh, N. P. and Dixit, G. P. (2021). Delineation of genotype-by-environment interactions for identification and validation of resistant genotypes in chickpea to *fusarium* wilt using GGE biplot. *Crop Protection*. **144**: 105-571.

Dubey, S.C., Singh, B., Gupta, Om., Saxena, D. R., Sharma, O. P., Kohire, O. D., Anadani, V. P., Singh, R. K. and Tripathi, A. (2017). Management of wilt and root rots of chickpea (*Cicer arietinum*) using *Trichoderma harzianum* in India. *Indian Journal of Agricultural Sciences.* **87**(10): 1283-1287.

Singh, R. K., Silavat, S., Patidar, J. K. and Vivek, K. (2019). Development of chickpea wilt (*Fusarium oxysporum* f. sp. *ciceri*) incidence in relation to soil edaphic and aerial environments. *Indian Journal of Agricultural Sciences.* **89**(2): 47-51.

Patidar, J. K., Kashyap, V., Singh, P. K., Singh, R. and Singh, R. K. (2018). Bio control potential of native strains of *Trichoderma* against *Rhizoctonia bataticola* causing dry root rot of chickpea. *International Journal of Agricultural Science.* **10**(2): 5066-5068.

Bharti, O. P., Pandya, R. K., Singh, R. K., Gupta, J.C., Kumar, A. and Sharma, R.C.(2018). Variability in *Sclerotinia sclerotiorum* of mustard in northern region of M.P. (India). *International Journal of Chemical Studies*. **6**(6): 1096-1099.

Bharti, O. P., Pandya, R. K., Singh, R. and Singh, R. K. (2019). A potential menace: Stem rot in mustard. *International journal of Chemical Studies*. **6**(6): 4672-4678.

Pal, S. L., Krishna, A., Singh, R.K. and Birla, N. (2018). Influence of date of sowing and chickpea varieties on occurrence of collar rot and variability among isolates of *Sclerotium rolfsii. International Journal of Chemical Studies*. **6** (3): 240-243.

Patidar, J. K., Kashyap, V., Singh, P. K., Singh, R. and Singh, R. K. (2018). Bio-control potential of native strains of *Trichoderma* against *Rhizoctonia bataticola* causing dry root rot of chickpea**.** *International Journal of Agriculture sciences*. **10**(2): 5066-5068

Publication of books

Singh, R.K. and Gopala (editors). (2021). *Innovative approaches in diagnosis and management of crop diseases: Volume I: Mollicutes*. ISBN : 978-1-77463-024-3. CRC Press, Taylor and Francis group

Singh, R.K. and Gopala (editors). (2021). *Innovative approaches in diagnosis and management of crop diseases: Volume II: Field and Horticultural Crops.* ISBN : 978-1-77463-025-3. CRC Press, Taylor and Francis group

Singh, R.K. and Gopala (editors). (2021). *Innovative approaches in diagnosis and management of crop diseases: Volume III: Nanomolecules and Bio control Agents.* ISBN : 978-1-77463-025-3. CRC Press, Taylor and Francis group

Gopala and Singh, R.K. (2021). *Diseases of Field and Horticultural Crops and Their Management*. ISBN: 978-93-89996-31-9. Jaya Publication Delhi.

Publication of manuals

Singh, R. K., Ashok Krishna and S.P. Mishra. (2017). Practical Manual on Fundamentals of Plant Pathology. RVSKVV No 77/2017

Gopala and Singh, R. K. (2019). Practical Manual on Diseases of Field and Horticultural Crops and their Management. RVSKVV No 99/2019

Publication of book chapters

Pradeep, K. and Singh, R.K. (2019). Biological control of postharvest diseases in vegetables. In: *The Vegetable Pathosystem: Ecology, Disease Mechanism and management*, (Eds: Ansar, M and Ghatak, A). Apple academic press CRC Press Taylor and Francis group. pp 457-481

Gopala., Singh, R. K. and Kishore, P. (2021). Recent insight into the detection and management of phytoplasma diseases. In: *Innovative approaches in diagnosis and management of crop diseases*, (Eds: Singh, R.K. and Gopala). Apple academic press CRC Press Taylor and Francis group. pp 1-22

Courses offered by the Department

S. No.	Title of the course	Course No	Total Credits
Major Courses			
1	Mycology	PL PATH-501	2+1
2	Plant Virology	PL PATH-502	2+1
3	Principles of Plant Pathology	PL PATH-504	3+0
4	Detection and Diagnosis of Plant Diseases	PL PATH-505	0+2

5	Disease Resistance in Plants	PL PATH-513	2+0
6	Plant Bacteriology	PL PATH-503	2+1
7	Seed Health Technology	PL PATH-510	2+1
8	Integrated Disease Management	PL PATH-516	2+1
9	Nematode Management	NEMA 510	2+1
10	Master Seminar	PL PATH-591	0+1
Minor Courses			
10	Classification of Insects	ENT 504	2+1
11	Principles of Integrated Pest management	ENT 510	1+1
12	Bio control of Crop Pest	ENT 507	1+1
13	Pests of Field Crops	ENT 511	1+1
Supporting Courses			
14	Statistical Methods	STAT 511	2+1
15	Design of Experiments	STAT 512	2+1
Non-Credit Courses			
16	Library and Information Services	PGS 501	0+1
17	Technical Writing and Communications Skills	PGS 502	0+1
18	Intellectual Property and its Management in Agriculture	PGS 503	1+0
19	Basics Concepts in Laboratory Techniques	PGS 504	0+1
20	Agricultural Research, Research Ethics and Rural Development Programmes	PGS 505	1+0
21	Disaster Management	PGS 506	1+0

Number of students cleared NET

S. No	Name of Students	ID	Name of examination
1	Chetan Dasondhi	18121805	CSIR-NET

Students' Placements

Name of Student	ID	Name and Place of Company/Institute
Imlesh Birla	16121806	FEO, JNKVV, CoA, Rewa
Tinku Lal Muchhala	16121815	FEO, JNKVV, CoA, Rewa
Janmoj Yadav	17121802	Syngenta, Pvt Ltd.
Manoj Vavlya	17121803	Syngenta, Pvt. Ltd.
Balkrishna Choudhary	18121804	NSC, New Delhi
Jaideep	18121807	Cotton Corporation of India

Faculty and Student's Awards (Academics) (2016-17 to 2020-21)

Name of award/distinction	Name of faculty/student	Work for which award/conferred
Research excellence award 2020 by Institute of Scholars	Dr. R.K. Singh	Research contribution
Meritorious award at college level	Priyanshi Nag	Students obtained highest OGPA at department level.
First position in best poster presentation award by	Dr. R.K. Singh	Indian Phytopathological Society in December, 2017
Young Scientist Associate Award	Dr. R.K. Singh	Agricultural Scientist and Farmers Congress on "Post-harvest technology and management for empowering the rural society and employment generation during 22-23 Feb 2020 organised by Bioved Research Institute of Agriculture, technology and Sciences Prayagraj
ISPRD Fellow	Dr. R.K. Singh	Indian Society of Pulse Research and Development by IIPR Kanpur in 2017

Soil Science & Agricultural Chemistry

Number of Publication

Name of Department	Faculty Name	Full length Paper	Conference/ Symposium	Books	Books Chapter	Manual	Annual/ Research Report
Soil Science and Agricultural Chemistry	Dr K. S. Bangar	8	2	-	-	1	5
	Dr B. B. Parmar	1	2	-	-	-	-
	Dr. Bharat Singh	18	2	-	2	-	-

List of publications

1. Sangeeta Lenka, Lenka N. K., Subba Rao A., Singh A. B., Raghuwanshi J, S. Kundu, Singh Bharat (2016). Global warming potential and greenhouse gas emission under different soil nutrient management practices in soybean-wheat system of central India. *Environmental Science and Pollution Research.* (DOI 10.1007/s11356-016-8189-5)
2. Bharat Singh, A.K. Sharma, Dushyant Bhagat, and Nitin Jat (2016). Effect of mustard yield and chemical composition by application of phosphorus and zink under Sodic Vertisols. *Progressive Research – An International Journal.* 3953 – 3157
3. Bharat Singh, Dushyant Bhagat, A.K. Sharma and Nitin Jat (2016). Assessment of decade wise temperature trends in Malwa region. *Progressive Research – An International Journal.* 3153 – 3157.
4. Bharat Singh, A.K. Sharma, Dushyant Bhagat and Nitin Jat (2016). Impact of different concentration of soluble salt water on growth parameters, yield and chemical composition of linseed (*Linunm ussitatissimum* L). *Progressive Research – An International Journal.* 3147-3149.
5. Bharat Singh, Dushyant Bhagat, A.K. Sharma and Nitin Jat (2016). Root length of soybean (*Glycine Max Merrill*) as influenced by rhizobacteria of wheat rhizosphere. *Progressive Research – An International Journal.* 3150-3152.
6. D.S. Yashona, K.S. Bangar, S.B. Aher and P.S. Rajput (2016). Effect of tubewell and sewage water on cadmium adsorption behaviour in soils of Malwa Region of Madhya Pradesh. *Journal of the Indian Society of Soil Science.* **64***(1):6-12* .
7. R.K. Sharma, S.C. Tiwari, U.R. Khandkar, and B.B. Parmar (2016). Assessing pre-canal irrigation scenario of soil, water and crop in head-reach of Indira Sagar Command. *Journal of Soil Salinity and Water Quality.* **8**(1):82-91.
8. Bharat Singh, MP Jain, AK Sharma1, NS Thakur, Shalini Singh, Shweta Pawar and Rini Shrivas (2017). Nutrient Management as a Tool for Enhancing Soybean Productivity and Soil Fertility. *Bulletin of Environment, Pharmacology and Life Sciences.* **6** *Special Issue* (5) 290-295.
9. Bharat Singh, MP Jain, AK Sharma, NS Thakur, Shalini Singh, Rini Shrivas and Shweta Pawar (2017). Effect of Reduced Tillage and Organics on Soil Properties, Growth and Productivity of Soybean (*Glycine Max* L). *Bulletin of Environment, Pharmacology and Life Sciences.* **6** *Special Issue* (5) 229-234.

10. Bharat Singh, MP Jain, NS Thakur, AK Sharma, Shalini Singh, Rini Shrivas and Shweta Pawar (2017). Cumulative Effect of Low Intensity Farming and use Of Organics on Soil Fertility and Nutrient Availability. *Bulletin of Environment, Pharmacology and Life Sciences.* **6** *Special Issue* (5) 168-171.
11. Bharat Singh, MP Jain, NS Thakur, AK Sharma, Shalini Singh, Shweta Pawar and Rini Shrivas (2017). Comparative and Interactive Study between Effects of Chemical and Organic Fertilizer on Soybean Growth, Yield, Soil Fertility and Productivity. *Bulletin of Environment, Pharmacology and Life Sciences*. **6** *Special Issue* (5) 154-158.
12. Bharat Singh, Shalini Singh, AK Sharma, NS Thakur, MP Jain, Rini Shrivas and Shweta Pawar (2017). Study of Wheat Crop Growth and Productivity Monitoring for Hoshangabad district in MP using Geospatial Technology. *Bulletin of Environment, Pharmacology and Life Sciences.* **6** *Special Issue* (5) 144-149.
13. K. Anupama, K.S. Bangar, V.K. Khaddar and Bharat Singh (2018). Fractions of Potassium in Soils of Agriculture College Research Farm, Indore, Madhya Pradesh, India. *International Journal of Current Microbiology and Applied Sciences Special Issue. (6) 341-350.*
14. Divya Bhayal, V.K. Khaddar, LalitaBhayal, Tikam Chand Yadav, K.S. Bangar and Bharat Singh (2018). Effect of Sunhemp Green Manuring and Intercropping on Soil Properties. *International Journal of Current Microbiology and Applied Sciences.* **7** *(12) 371-384.*
15. Divya Bhayal, Lalita Bhayal, V. K. Khaddar, K. S. Bangar and Bharat Singh (2018). Growth and Yield Response of Soybean and Maize to Sunhemp Green Manuring and Intercropping in a Vertisols. *International Journal of Pure Applied Bioscience.* **6** *(6): 187-198.*
16. Ravi Kumar, Vishwakarma, A.K., Biswas, A.K. and Parmar, B.B. (2019). Effect of different levels of residue retention on crop performance of soybean under conservation agriculture. *International Journal of Chemical studies.* (10) 24-35.
17. Deepak Kumar Ausari1, Bharat Singh,Aakash, Rahul Kumawat and Yashwant Gehlot (2020). GIS Based Mapping of Soil Fertility Status of Tehsil Jobat, District Alirajpur, Madhya Pradesh, India. *International Journal of Current Microbiology and Applied Sciences.* **9** (10) 60-69.
18. Bharat Singh, Shweta Pawar, Ashok Sharma, N.S. Thakur and RiniShrivas (2020). Bharat Singh, Shweta Pawar, Ashok Sharma, N.S. Thakur and RiniShrivas. Effect of organics and inorganics on soil properties - A step towards nutrient management in Vertisols of Malwa Region. *International Journal of Current Microbiology and Applied Sciences Special Issue (*10) 1-10.
19. Shweta Pawar, Bharat Singh, N.S. Thakur, Ashok Sharma, and RiniShrivas (2020). Integrated Nutrient Management – A remedy for enhancing the lives of Microbes in soil. *International Journal of Current Microbiology and Applied Sciences Special Issue* (10) 11-15.
20. Shweta Pawar, Bharat Singh, Ashok Sharma, N.S. Thakur and RiniShrivas (2020). Nutrient Management Practices for Enhancing Soybean Production in Rainfed condition. *International Journal of Current Microbiology and Applied Sciences Special Issue* (10) 16-23.
21. Rini Shrivas, Bharat Singh, N.S. Thakur, Ashok Sharma, and Shweta Pawar (2020). Reduced tillage and use of organics: A progressive manoeuvre towards conservation of resources and improvement in soil intrinsic properties.

International Journal of Current Microbiology and Applied Sciences Special Issue. (10) 24-35.

22. SC Tiwari, Narendra Kumawat, KS Bangar, RK Sharma, MJ Kaledhonkar and BL Meena (2020). Yield and water productivity of cabbage on sodic vertisols as influenced by drip application rate and irrigation schedule. *Journal of Soil Salinity and Water Quality.* **12**(2):271-276.
23. Yashwant Gehlot, Aakash, Roshan Gallani, K S Bangar and Sudheer Kumar Kirar (2019). Nature of soil reaction and status of EC, OC and macro nutrients in Ujjain tehsil of Madhya Pradesh. *International Journal of Current Microbiology and Applied Sciences.* **7** (6) 1323-1326.
24. U.R. Khandkar, S.C. Tiwari, Narendra Kumawat, Awani K Ashok, KS Bangar and S.P. Singh (2019).Effect of micronutrients, organics and biofertilizers on growth and yield of soybean under vertisols. *J. Exp. Zool. India Vol. XX, No. X, pp 108-111*..
25. Yashona, D.S., K.S. Bangar, S.B. Aher and P.S. Rajput (2016). Effect of tubewell and sewage water on cadmium adsorption behavior in soils of Malwa region of Madhya Pradesh. *Journal of the Indian Society of Soil Science.* **64**(1):6-12.
26. Narendra Kumawat, S.C. Tiwari, KS Bangar, U.R. Khandkar, Awani K Ashok and R.K. Yadav (2021).Influence of different sources of plant nutrients on soil fertility, nutrient uptake and productivity of soybean under Vertisols. *Legume research.* **44**(5):556-561.
27. Narendra Kumawat, Rakesh kumar Yadav, KS Bangar, S.C. Tiwari, Jagdeesh Morya and Rakesh Kumar (2019). Studies on integrated weed management practices in maize – A review. *Agricultural Reviews*. **40**(1):29-36.

Courses offered by the Department

S. No.	Title of the Course	Course No.	Total Credits
1	Soil Fertility and fertilizer use	SOILS 502	4(3+1)
2	Soil chemistry	SOILS 503	3(2+1)
3	Soil Mineralogy, Genesis, Classification and survey	SOILS 504	3(2+1)
4	Soil Biology and Bio chemistry	SOILS 506	3(2+1)
5	Soil Physics	SOILS 501	3(2+1)
6	Soil, water and air pollution	SOILS 509	3(2+1)
7	Remote sensing and GIS Techniques for Soil and Crop Studies	SOILS 510	3(2+1)
8	Principle and practices of water management	AGRON 504	3(2+1))
9	Dryland farming	AGRON 512	3(2+1)
10	Principle and practices of organic farming	AGRON 513	3(2+1)
11	Principle and practices of soil fertility	AGRON 502	3(2+1)
	Design of experiments	STAT 512	3(2+1)

	Statistical Method for Applied Sciences	STAT 511	4(3+1)

Student's Placements

S. No.	Name of Students	ID number	Batch	Govt. Job
1	Rini Shrinivas	16121306	2016-17	Agriculture Officer in BOI

List of Faculty Award:-

S.No	Name	Name of the award	Awarding organization	Year	National/international/ institutional/professional society
1.	Dr Bharat Singh	Outstanding Achievement Award	S&T SIRI Warangal Telangana State	2017	Professional Society
2	Dr. K S Bangar	Reviewer Excellence Award	ARCC, Hisar	2021	**Legume Research** (An International Journal)

Vegatable Science

Number of Publication

Faculty name	Designation	Full paper	Conference /Symposium	Books	Book chapter	Manual	annual/ Research reports
Dr. N.K. Gupta	Principle Scientist	3	-	1	-	-	-
Dr. Swati Barche	Professor	13	5	4	-	1	-
Dr. K.P. Asati (Transfered)	Professor	4	-	-	-	-	-
Dr. Diksha Tembhare	Scientist	4	-	-	-	-	-

List of publications

Barche,S. and. Kirad, K. S (2020). Efficacy of herbicides on weed growth and bulb yield in onion under kymour plateau region of Madhya Pradesh, India.). *Int .J. Agric. Sciences,* **16**(2): 218-222.

Barche**,** S., Singh, D. D. and. Kirad, K. S. (2020). Impact of priming techniques on germination, vigor, growth and survivability of drumstick (*Moringa oleifera* L) Variety PKM-1 under open and protected condition. *Int.J. Agric. Sciences*, 16(2): 170-174.

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Publication of Books

K.S.Kirad, S.S. Chouhan. G.S. Ghatiye, Swati Barche, Bhupendra Kurmi and M.P. Nayak (2021) . Hand Book of INM. Brillion Publishing,New Delhi, ISBN-978-93-86658-24-1

Kamal.S.Kirad, G.S.Gathia, S.S.Chauhan, S.K.Badaiya, J.S.Rajput and S.Barche (2018**).** Hand Book of DAESI. 978-93-87445-08-6. Brillion Publishing. NewDelhi.

Kamal S. Kirad,Swati Barche and N.K.Gupta. Fundamentals of Horticulture (2017). Brillion Publishing, New Delhi**.** ISBN 978-93-87445-06-02.

Swati Barche, Kamal S. Kirad, Reena Nair, P.K. Jain and S.K. Sengupta (2016). Production technology of spices, aromatic, medicinal and plantation crops. NIPA, New Delhi 978-93-85516-06-1

Courses offered by the Department

SNo.	Title of the course	Course No	Total Credits
Major Courses			
1.	Production tech. of cool season vegetable crops	VSC-501	3(2+1)
2.	Production tech. of warm season vegetable crops	VSC-502	3(2+1)
3.	Breeding methods of vegetable crops	VSC-503	3(2+1)
4.	Growth and development of vegetable crops	VSC-504	3(2+1)
5	Seed production tech. of vegetable crops	VSC-505	3(2+1)
6	Production Tech. of underexploited crops	VSC-507	3(2+1)
7	Organic vegetable production technology	VSC-508	(1+1)
Minor Courses			
8.	Tropical and Dry land fruit production	FSC-501	3(2+1)
9.	Propagation and nursery management of fruits crops	FSC-505	3(2+1)
10.	Growth and development of horticultural crops	FSC-508	3(2+1)
11.	Canopy management in fruit crops	FSC-504	3(2+1)
Master's Seminar			
1.	Master's Seminar	VSC-591	1(0+1)
Master's Research			
1.	Master's Research	VSC-599	10(0+10)

Number of Students Cleared NET

S. No	Name of Students	ID	Name of Examination
1	Ms. Inderpreet Kaur	152M04	ASRB-NET
2	Ms. Usha Parmar	153M06	ASRB-NET
3	Mr. Halke Bhaiya	152M03	ASRB-NET
4	Kishan Singh Damour	152M05	ASRB-NET
5	Nimisha Raj Jain	16121406	ASRB-NET
6	Bhanuja Dwivedi	16121403	ASRB-NET
7	Ajay Kumawat	16121401	ASRB-NET
8	Sunil Baghel	16121408	ASRB-NET
9	Saurabh yadav	17121405	ICAR-NET+SRF
10	Hariom Raghuwanshi	16111402	ASRB-NET
11	Ajay Kadi	152M110	ASRB-NET

Student's Placements

Name of Student	ID	Name and Place of Company/Institute
Mr. Halke Bhaiya	152M03	Technical Assistant, DRDO, Aulli, Uttarakhand
Sunil Baghel	16121408	Agriculture Officer
Hariom Raghuwanshi	16111402	Quality control officer
Shailendra Kumawat	17121406	Assistant Professor (Contractual)
Upasna Parmar	16111407	Quality control officer
Kishan Singh Damor	152M05	Spices Management Trainee at Spices Board of India, Ministry of Commerce and Industries, Govt. of India

Faculty and Student's Awards (Academics) (2016-17 to 2020-21)

FACULTY AWARD Dr. Swati Barche	• Distinguished faculty Award for the contribution and achievement in the field of fruit Science by Venus International Foundation, Chennai on 9th July, **2016.** • Bioved Young Scientist Associate Award 2020 on the 22nd Agricultural Scientists and Farmers Congress on PHT & Management for empowering the rural society and Employment Generation on 22-23 Feb, 2020 at Prayagraj.
Dr. Deeksha Tembhare	• Young Scientist Award-2017, Ashtha foundation
STUDENT AWARD Jain NR and **Barche, S**	**Received Second position in poster presentation** entitled "Effect of germination and seedling vigor for the most ideal soil media of different varieties of Drumstick during the National seminar on "Advances and challenges in Horticulture" 26-27 February, 2019 at JNKVV, Jabalpur (M.P.)

राजमाता विजयाराजे सिंधिया कृषि विश्वविद्यालय
कृषि महाविद्यालय इन्दौर (म.प्र.) 452001
RAJMATA VIJAYARAJE SCINDIA KRISHI VISHWAVIDYALAYA
COLLEGE OF AGRICULTURE INDORE (M.P.) 452001

डॉ. अशोक कुमार शर्मा
अधिष्ठाता
Dr. Ashok Kumar Sharma
Dean

E-mail : dean.indore@rvskk.net
Fax : 91-0731-2496989
Phone : (O) 91-0731-2492607
Mobile : 83194 32708, 93007 48208

No. : 1723
Dated : 08/11/2021

CERTIFICATE

I, the **Dean, College of Agriculture, Indore** hereby certify that the information contained in Sections 6.4.1 to 6.4.9 are furnished as per the record available in the college and degree awarding university.

Signature of the Dean of the college with Date & Seal

Dean
College of Agriculture
INDORE